



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



CPH3145/CPH3245

Low VCE (sat) Bipolar Transistor (PNP)NPN, (-)50V, (-)2A



ON Semiconductor®

www.onsemi.com

Features

- Adoption of MBIT Process
- Large Current Capacity
- Low Collector to Emitter Saturation Voltage
- High Speed Switching
- Ultrasmall Package Facilitates Miniaturization in End Products (mounting height : 0.9mm)
- High Allowable Power Dissipation

Typical Applications

- Relay Drivers
- Lamp Drivers
- Motor Drivers
- Flash

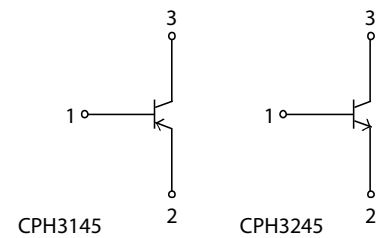
SPECIFICATIONS () : CPH3145

ABSOLUTE MAXIMUM RATING at Ta = 25°C (Note 1)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	VCBO	(-50)80	V
Collector to Emitter Voltage	VCES	(-50)80	V
Collector to Emitter Voltage	VCEO	(-)50	V
Emitter to Base Voltage	VEBO	(-)6	V
Collector Current	IC	(-)2	A
Collector Current (Pulse)	ICP	(-)4	A
Base Current	IB	(-)400	mA
Collector Dissipation When mounted on ceramic substrate (600mm ² × 0.8mm)	PC	0.9	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

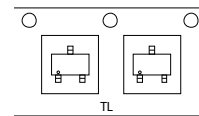
Note 1 : Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CONNECTION

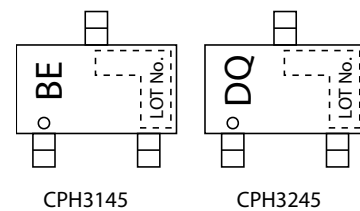


1 : Base
2 : Emitter
3 : Collector

PACKING TYPE : TL



MARKING



CPH3145

CPH3245

ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.

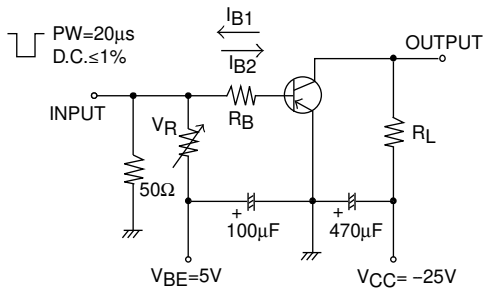
CPH3145/CPH3245

ELECTRICAL CHARACTERISTICS at $T_a = 25^\circ\text{C}$ (Note 2)

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40\text{V}, I_E = 0\text{A}$			(-1)	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0\text{A}$			(-1)	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)2\text{V}, I_C = (-)100\text{mA}$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)300\text{mA}$		420		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(16)8		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)1\text{A}, I_B = (-)50\text{mA}$		(-165)130	(-330)260	mV
Base to Emitter Saturation Voltage	$V_{BE(sat)}$			(-0.9)	(-1.2)	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0\text{A}$	(-50)80			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C = (-)100\mu\text{A}, R_{BE} = 0\Omega$	(-50)80			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-50)			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0\text{A}$	(-6)			V
Turn-ON Time	t_{on}	See specified Test Circuit		(35)35		ns
Storage Time	t_{stg}			(200)330		ns
Fall Time	t_f			(24)40		ns

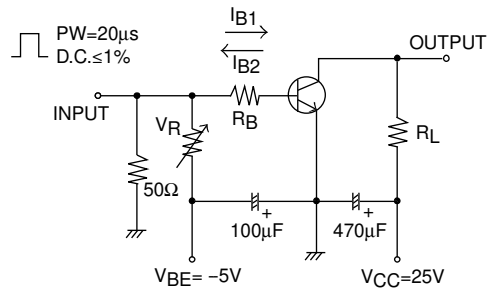
Note 2 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Switching Time Test Circuit



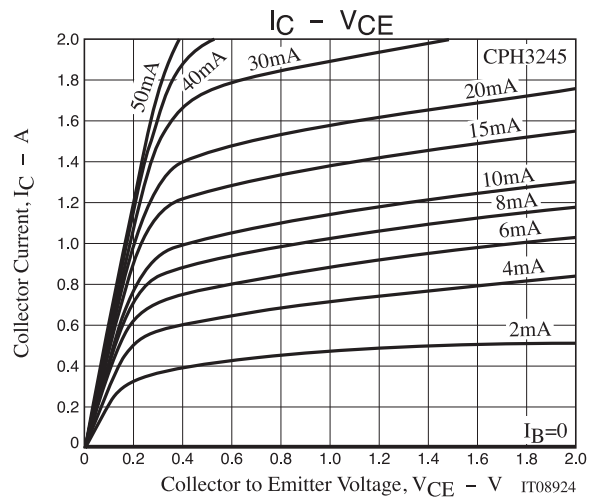
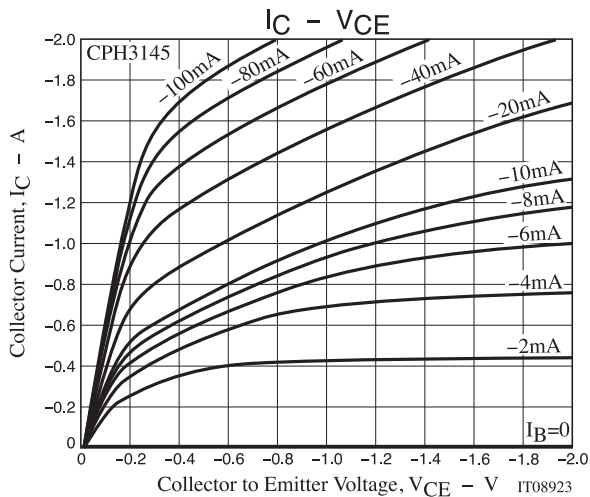
$$I_C = -10I_{B1} = 10I_{B2} = -0.7\text{A}$$

CPH3145

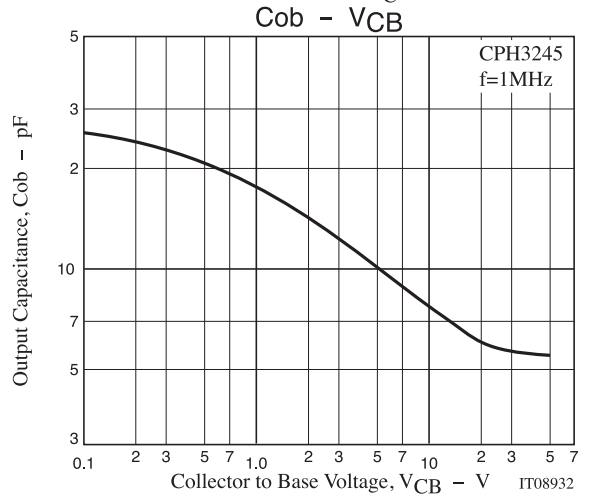
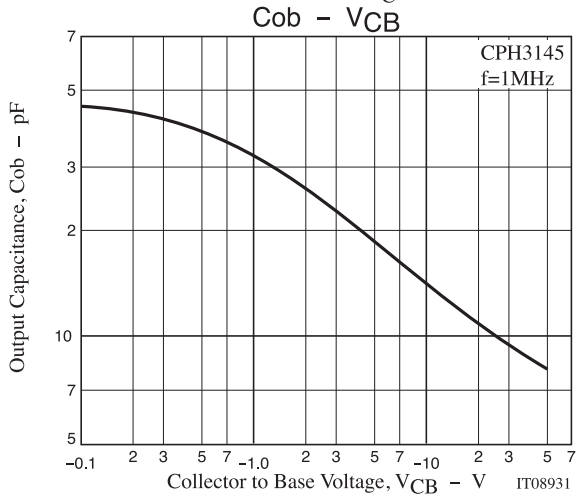
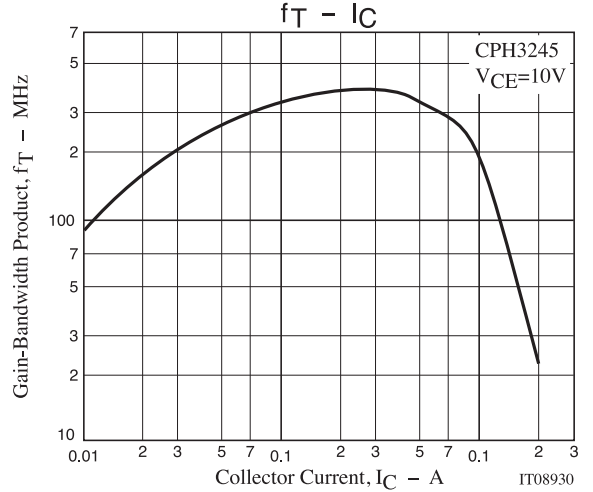
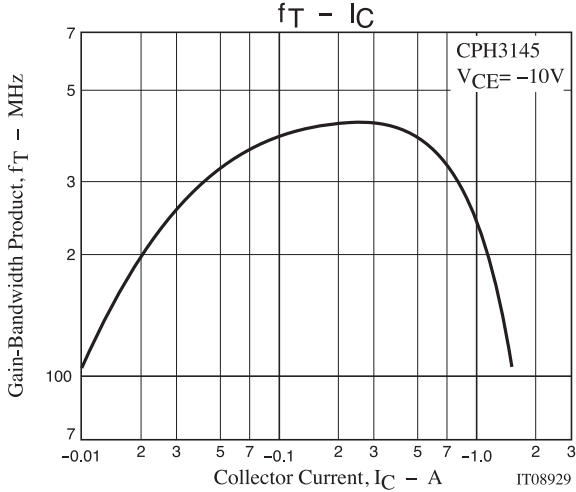
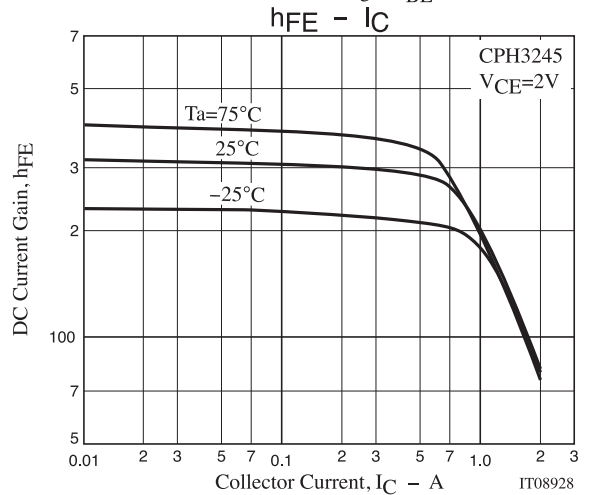
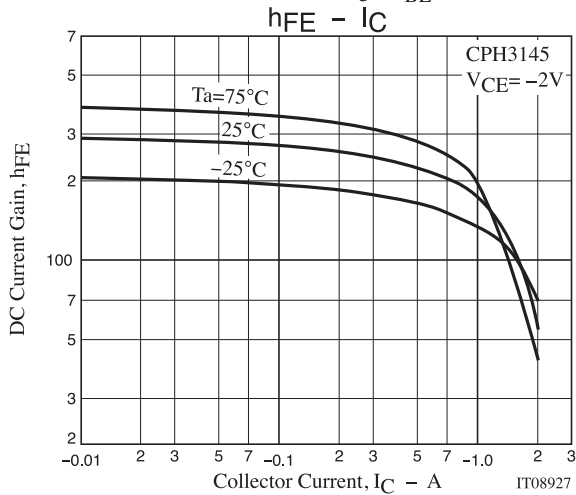
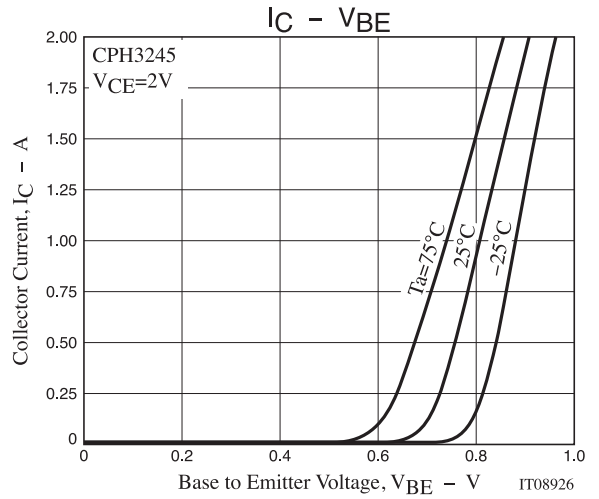
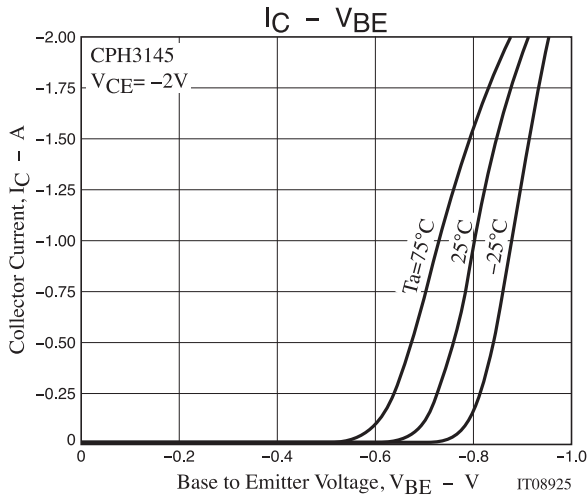


$$I_C = 10I_{B1} = -10I_{B2} = 0.7\text{A}$$

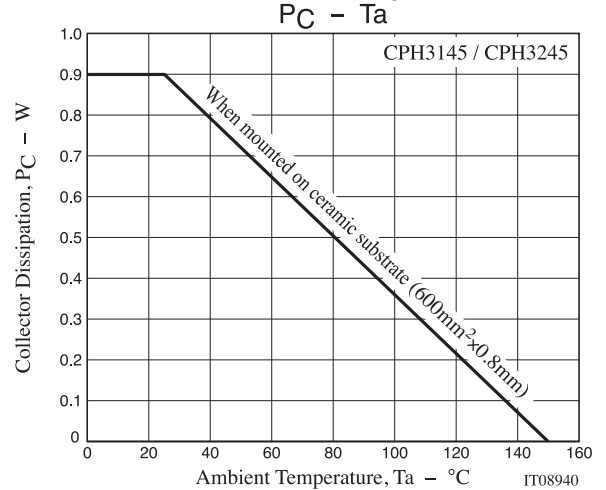
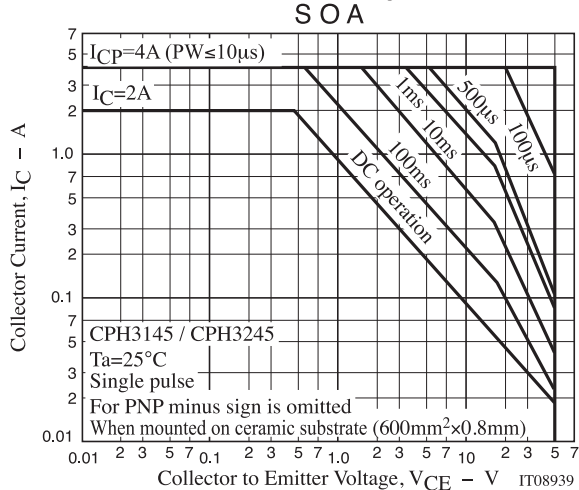
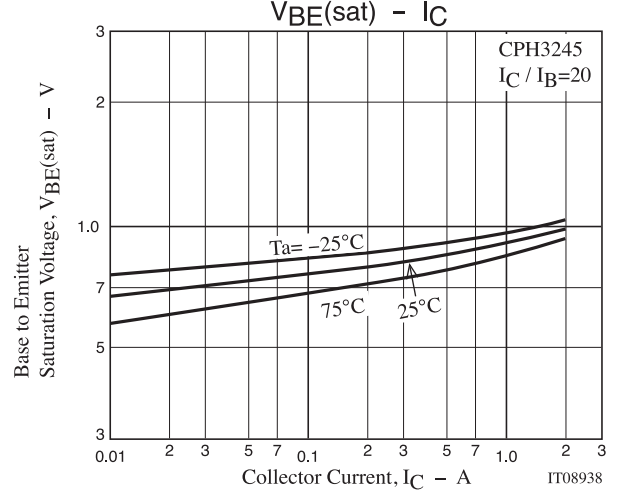
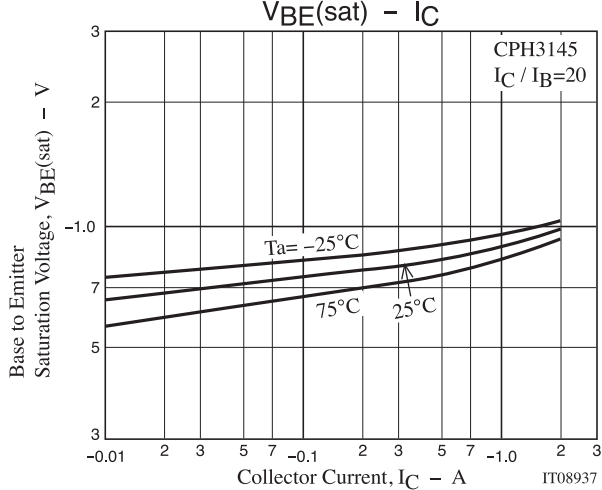
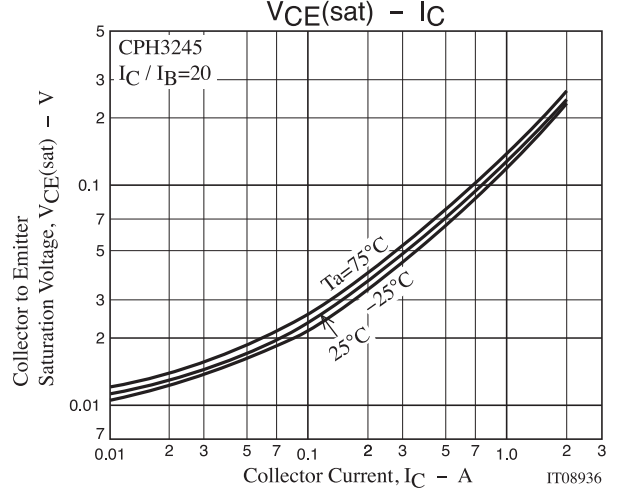
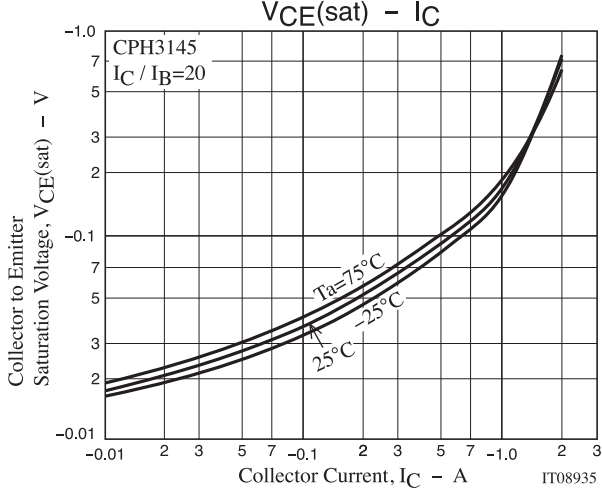
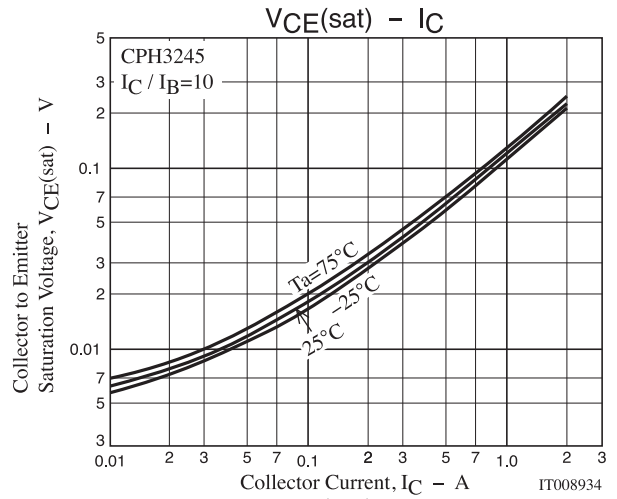
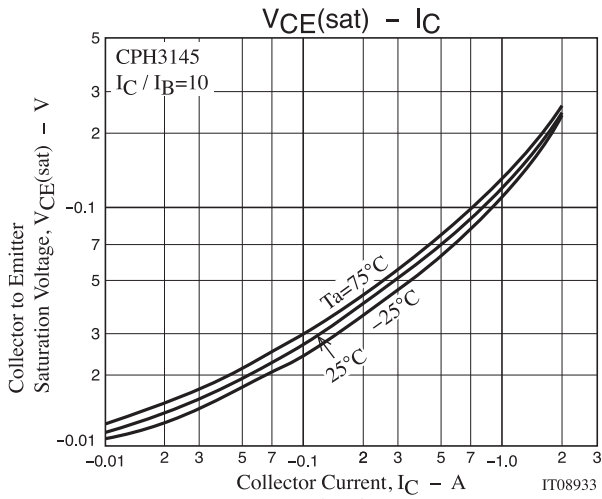
CPH3245



CPH3145/CPH3245



CPH3145/CPH3245

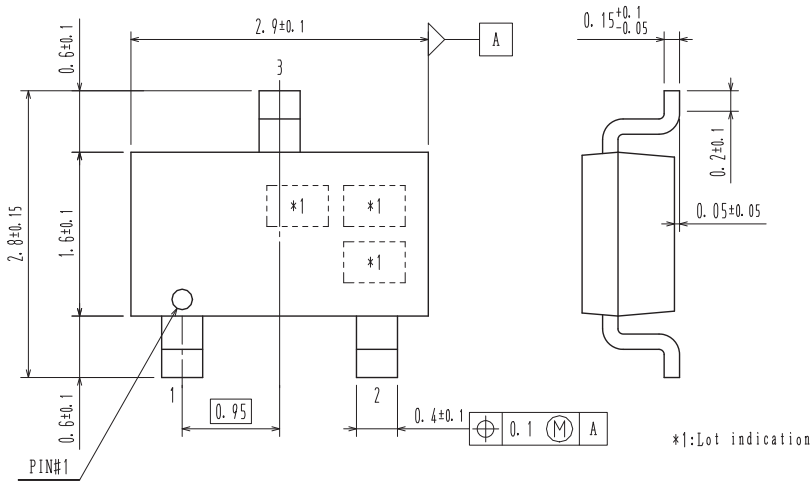


CPH3145/CPH3245

PACKAGE DIMENSIONS

unit : mm

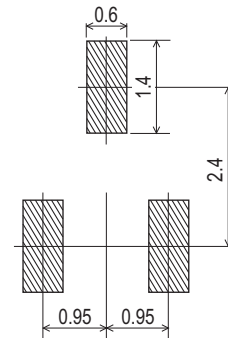
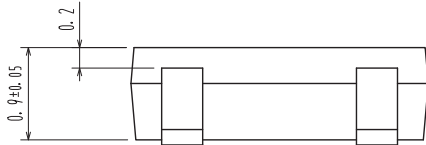
CPH3
CASE 318BA
ISSUE 0



*1: Lot indication

- 1 : Base
- 2 : Emitter
- 3 : Collector

Recommended Soldering Footprint



ORDERING INFORMATION

Device	Marking	Package	Shipping (Qty / Packing)
CPH3145-TL-E	BE	CPH3 SC-59, SOT-23, TO-236 (Pb-Free)	3,000 / Tape & Reel
CPH3245-TL-E	DQ		

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.