



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.

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SANYO Semiconductors

DATA SHEET

2SC6144 — NPN Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

- Relay drivers, lamp drivers, motor drivers.

Features

- Adoption of MBIT process.
- High current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.

Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		60	V
Collector-to-Emitter Voltage	V_{CEO}		50	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		10	A
Collector Current (Pulse)	I_{CP}		13	A
Base Current	I_B		2	A
Collector Dissipation	P_C		2	W
		$T_c=25^\circ\text{C}$	25	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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SANYO Semiconductor Co., Ltd.

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2SC6144

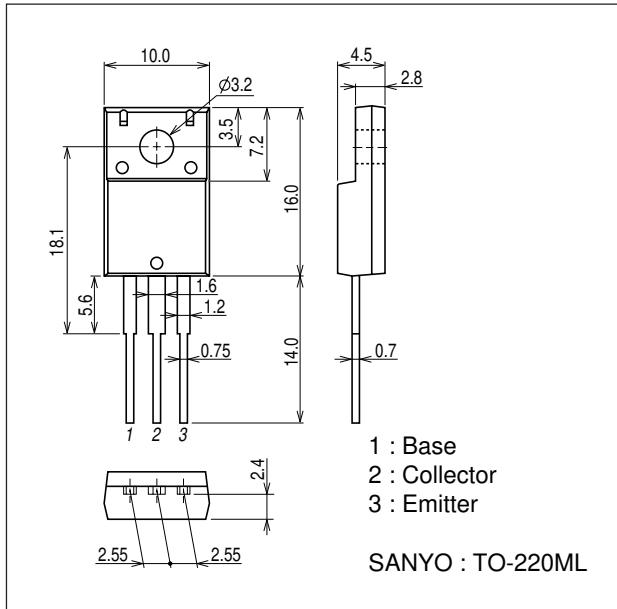
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=40V, I_E=0A$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0A$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=2V, I_C=270mA$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=3A$		330		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		60		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=6A, I_B=300mA$		180	360	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=6A, I_B=300mA$			1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0A$	60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0A$	5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		62		ns
Storage Time	t_{stg}	See specified Test Circuit.		350		ns
Fall Time	t_f	See specified Test Circuit.		25		ns

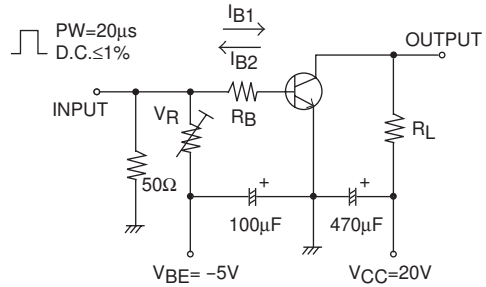
Package Dimensions

unit : mm (typ)

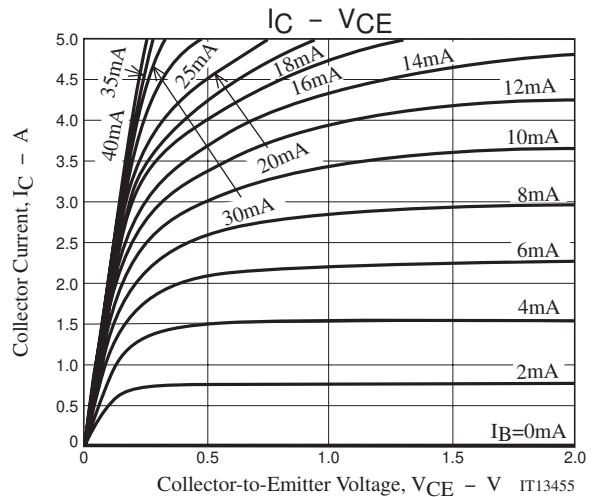
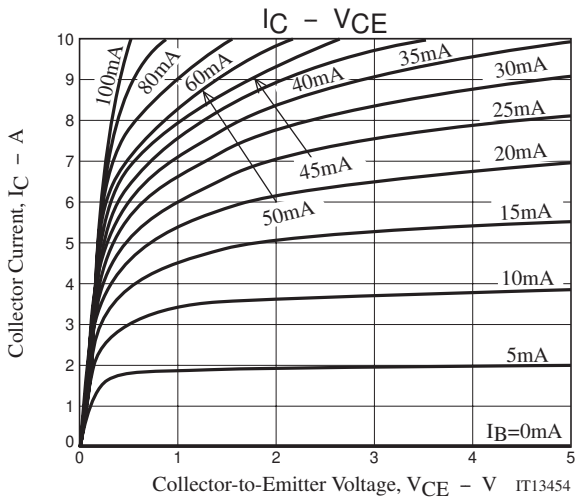
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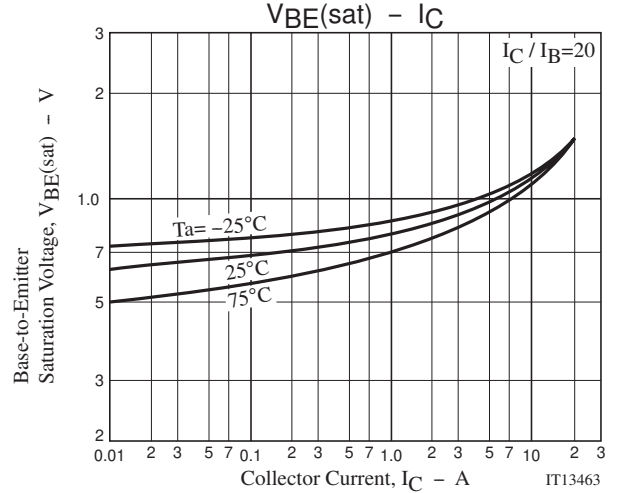
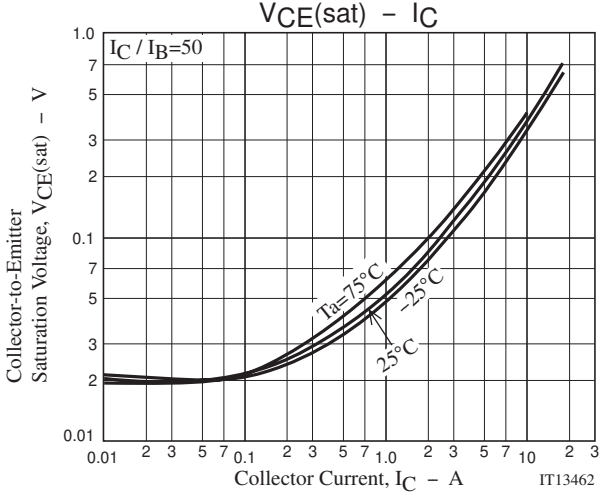
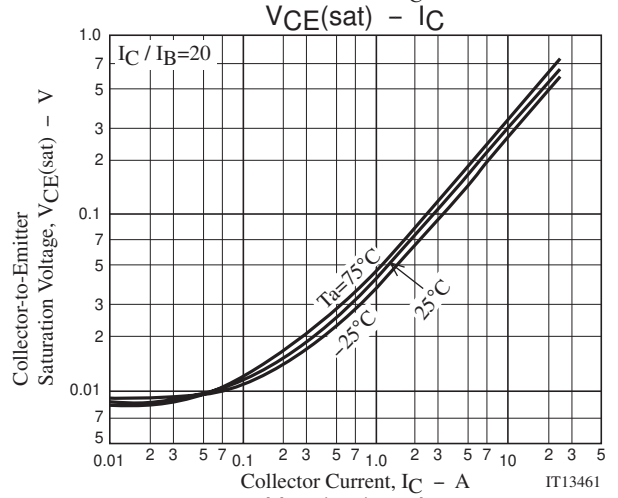
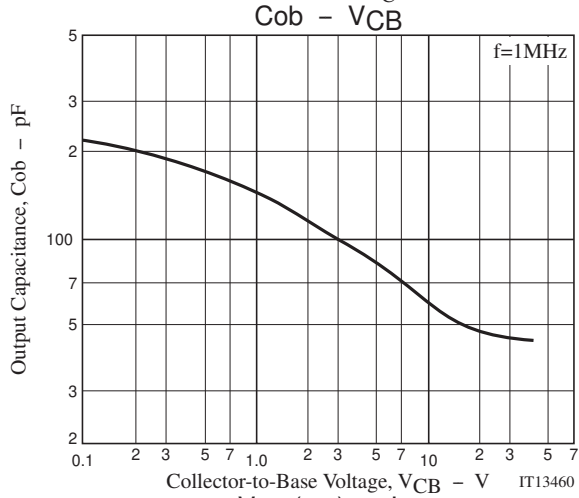
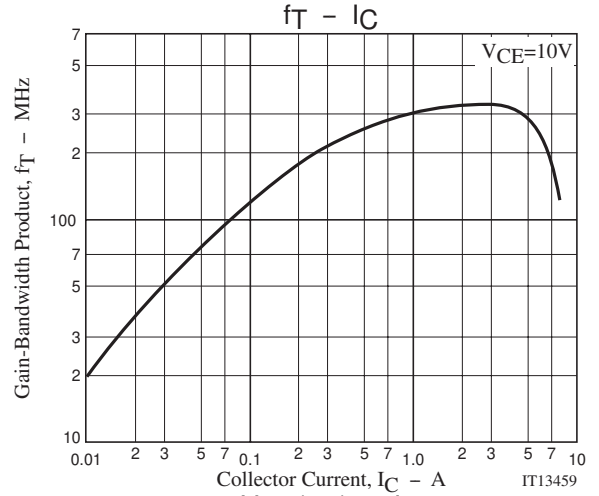
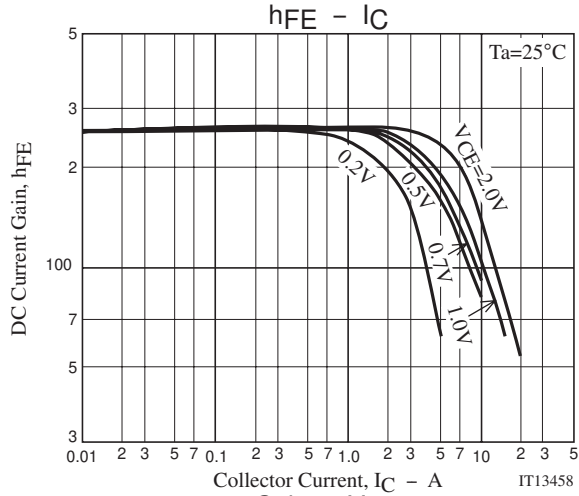
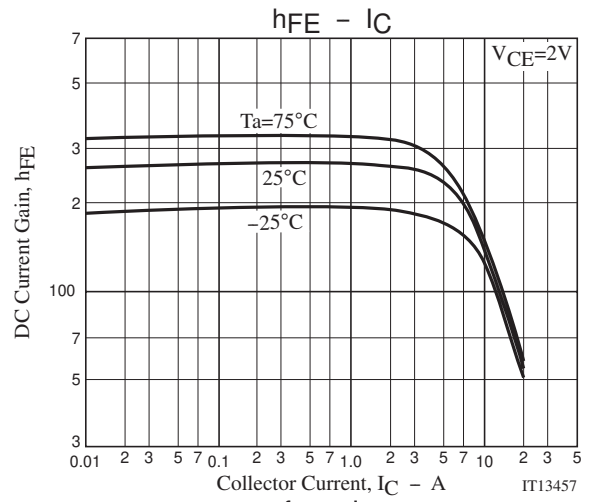
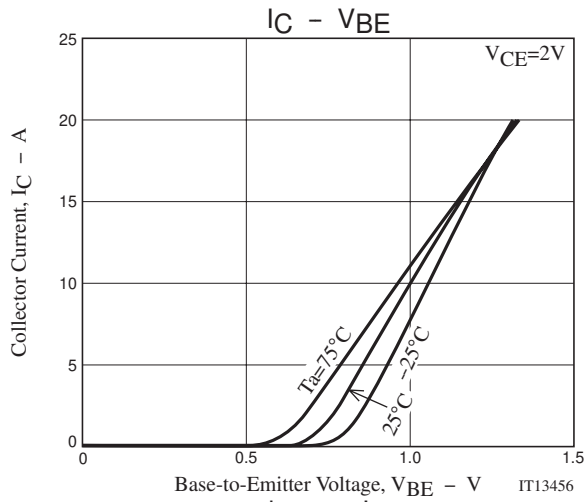


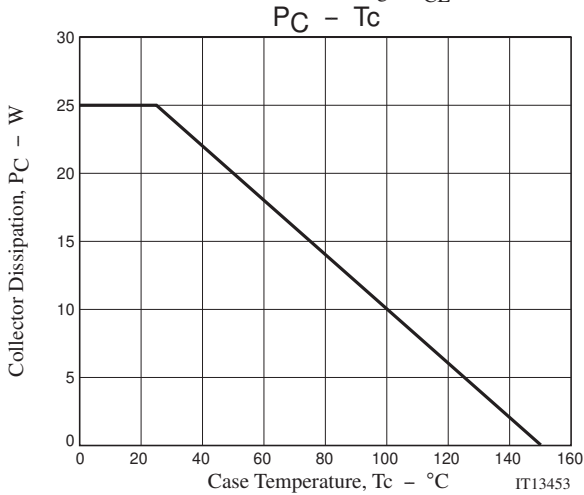
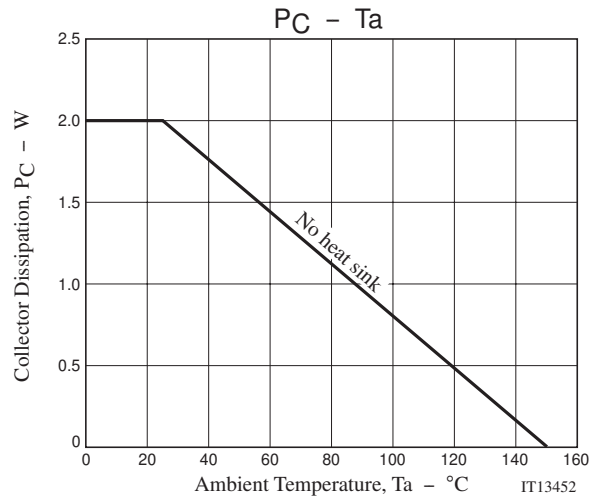
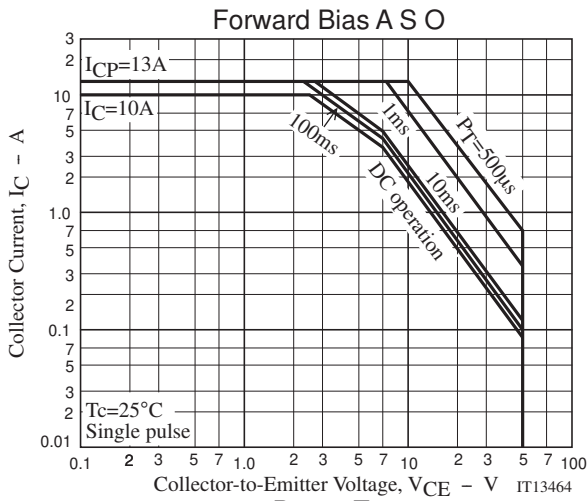
Switching Time Test Circuit



$$I_C = 20I_{B1} = -20I_{B2} = 5A$$







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