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!

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BCP53-16

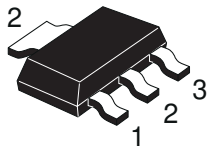
LOW POWER PNP TRANSISTOR

Ordering Code	Marking
BCP53-16	BCP5316

- SILICON EPITAXIAL PLANAR PNP MEDIUM VOLTAGE TRANSISTOR
- SOT-223 PLASTIC PACKAGE FOR SURFACE MOUNTING CIRCUITS
- TAPE AND REEL PACKING
- THE NPN COMPLEMENTARY TYPE IS BCP56-16

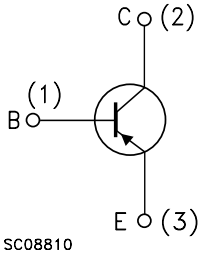
APPLICATIONS

- MEDIUM VOLTAGE LOAD SWITCH TRANSISTORS
- OUTPUT STAGE FOR AUDIO AMPLIFIERS CIRCUITS
- AUTOMOTIVE POST-VOLTAGE REGULATION



SOT-223

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage (I_E = 0)	-100	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	-80	V
V_{CER}	Collector-Emitter Voltage (R_{BE} = 1KΩ)	-100	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	-5	V
I_C	Collector Current	-1	A
I_{CM}	Collector Peak Current (t_p < 5 ms)	-1.5	A
I_B	Base Current	-0.1	A
I_{BM}	Base Peak Current (t_p < ms)	-0.2	A
P_{tot}	Total Dissipation at T_{amb} = 25 °C	1.6	W
T_{stg}	Storage Temperature	-65 to 150	°C
T_j	Max. Operating Junction Temperature	150	°C

THERMAL DATA

$R_{thj\text{-}amb}$ •	Thermal Resistance Junction-Ambient	Max	78	°C/W

• Device mounted on a PCB area of 1 cm^2

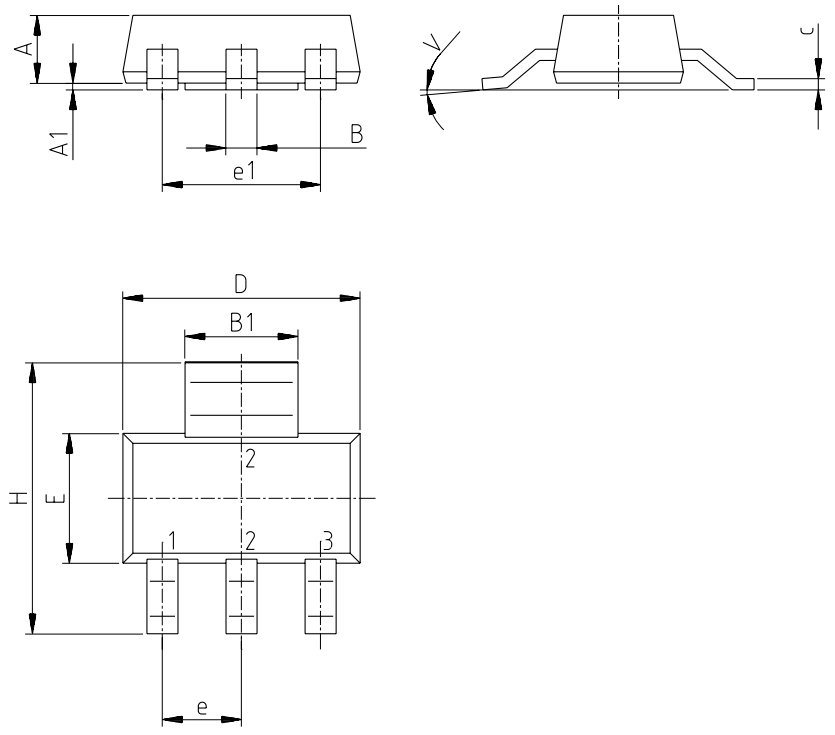
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (I_E = 0)	V_{CB} = -30 V V_{CB} = -30 V T_j = 125 °C			-100 -10	nA µA
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_E = 0)	I_C = -100 µA	-100			V
$V_{(BR)CEO}$*	Collector-Emitter Breakdown Voltage (I_B = 0)	I_C = -20 mA	-80			V
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage (R_{BE} = 1 KΩ)	I_C = -100 µA	-100			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_C = 0)	I_E = -10 µA	-5			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = -500 mA I_B = -50 mA			-0.5	V
$V_{BE(on)}$*	Base-Emitter On Voltage	I_C = -500 mA V_{CE} = -2 V			-1	V
h_{FE}*	DC Current Gain	I_C = -5 mA V_{CE} = -2 V I_C = -150 mA V_{CE} = -2 V I_C = -500 mA V_{CE} = -2 V	40 100 25		 250	
f_T	Transition Frequency	I_C = -10 mA V_{CE} = -5 V f = 20 MHz		50		MHz

* Pulsed: Pulse duration = 300 µs, duty cycle ≤ 1.5 %

SOT-223 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.80			0.071
B	0.60	0.70	0.80	0.024	0.027	0.031
B1	2.90	3.00	3.10	0.114	0.118	0.122
c	0.24	0.26	0.32	0.009	0.010	0.013
D	6.30	6.50	6.70	0.248	0.256	0.264
e		2.30			0.090	
e1		4.60			0.181	
E	3.30	3.50	3.70	0.130	0.138	0.146
H	6.70	7.00	7.30	0.264	0.276	0.287
V			10°			10°
A1		0.02				



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