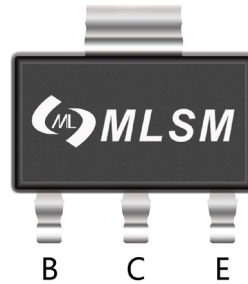
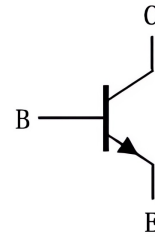


Features

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary type: BCP69 (PNP)



SOT-223 top view



Schematic diagram



Halogen-Free

Maximum Ratings(Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	32	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	94	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

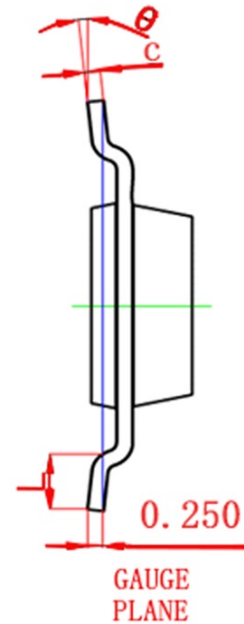
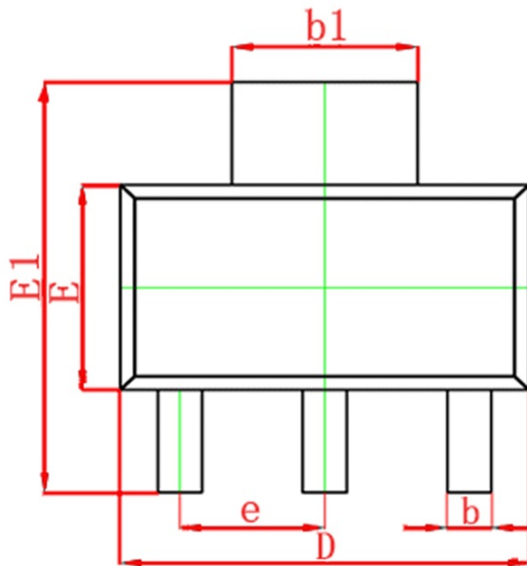
Electrical Characteristics (TJ=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	32	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	20	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=25V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V, I_C=0$	--	--	0.1	μA
h_{FE1}	DC current gain	$V_{CE}=1V, I_C=500mA$	85	--	375	--
h_{FE2}		$V_{CE}=1V, I_C=1A$	60	--	--	
h_{FE3}		$V_{CE}=10V, I_C=5mA$	50	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=1A, I_B=100mA$	--	--	0.5	V
f_T	Transition frequency	$V_{CE}=5V, I_C=10mA, f=100MHz$	40	--	--	MHz
C_{ob}	Collector output capacitance	$V_{CB}=5V, I_E=0, f=1MHz$	--	38	--	
V_{BE1}	Base-emitter voltage	$V_{CE}=10V, I_C=5mA$	--	--	0.68	V
V_{BE2}		$V_{CE}=1V, I_C=1A$	--	--	1	

Ordering Information (Example)

Type	Hfe	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCP68	85-160	BCP68-10	2,500	5,000	35,000	13"reel
BCP68	100-250	BCP68-16	2,500	5,000	35,000	13"reel
BCP68	160-375	BCP68-25	2,500	5,000	35,000	13"reel

SOT-223 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	--	1.800	--	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	3.300	3.700	0.130	0.146
E1	6.700	7.300	0.264	0.287
e	2.300(BSC)		0.091(BSC)	
L	0.750	--	0.030	--
θ	0°	10°	0°	10°