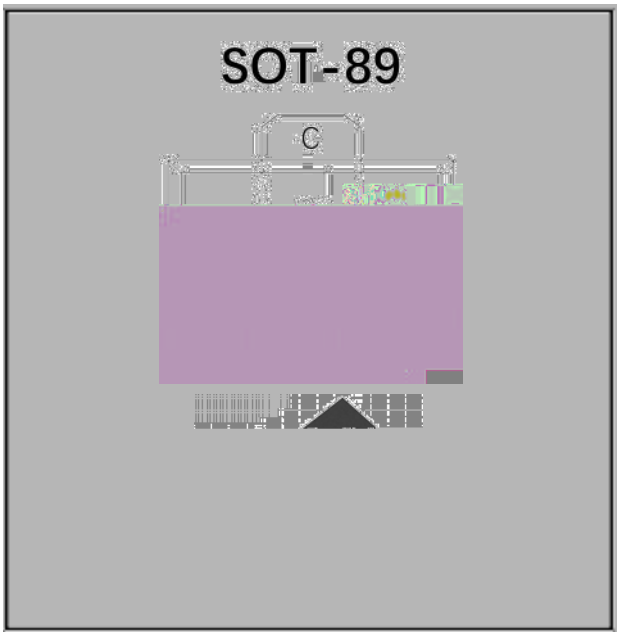
RoHS
COMPLIANT



- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix ”HF”
- Moitsure Sensitivity Level 1
- Low collector-emitter saturation voltage

- : SOT-89
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:S48

■ (Ta=25 unless otherwise noted)

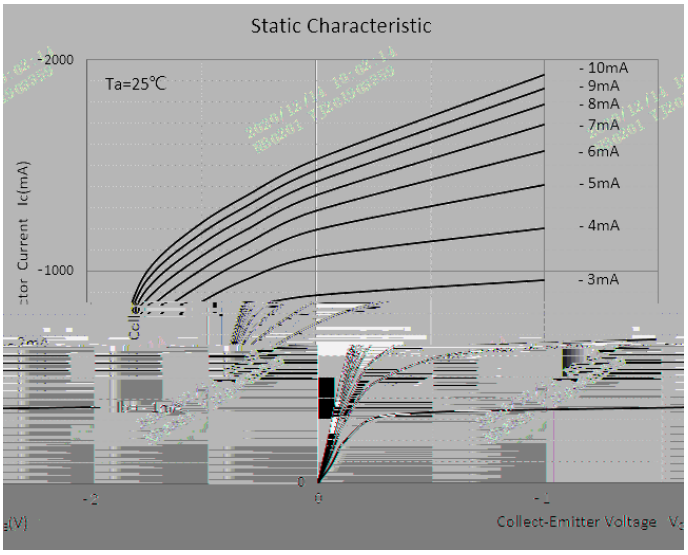
Minimum Collector-Emitter Voltage	V_{CEO}	V	I_C=-10mA, I_B=0	-40
Minimum Collector-Base Voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-40
Minimum Emitter-Base Voltage	V_{EBO}	V	I_E=-100uA, I_C=0	-5
Collector Current	I_C	A		-2
Collector Power Dissipation	P_C	mW		500
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	/W		250
Operation Junction Temperature	T_j			-55 to +150
Storage Temperature	T_{stg}			-55 to +150

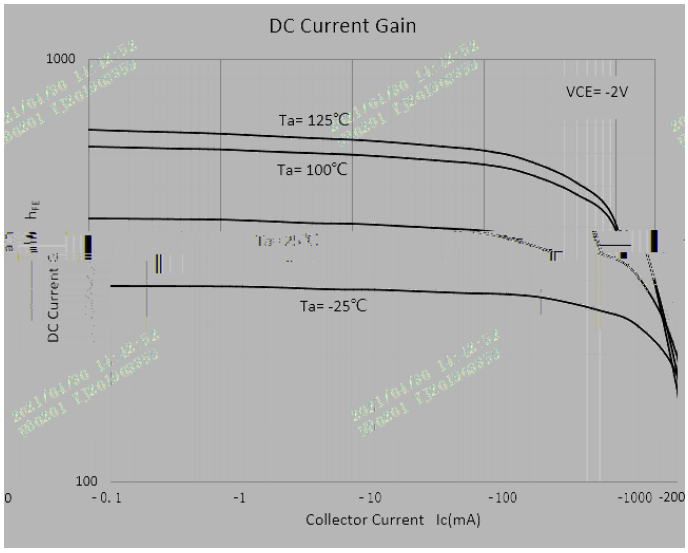
■ (Ta=25 unless otherwise noted)

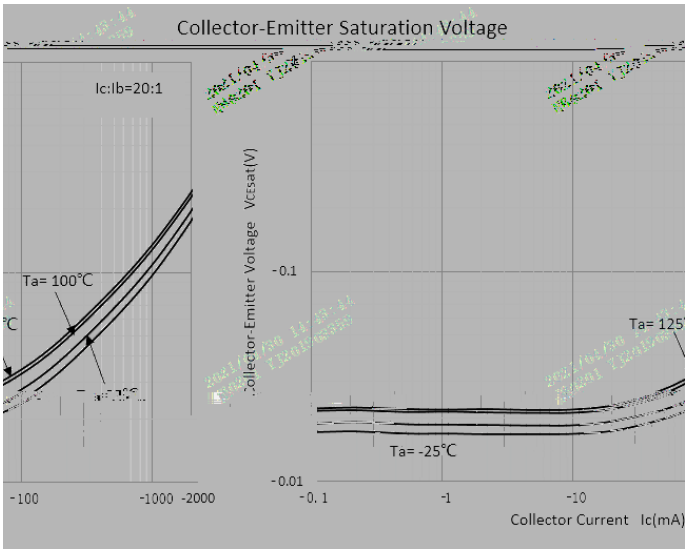
Collector-Emitter Voltage	V_{CEO}	V	I_C=-10mA, I_B=0	-40	
Collector-Base Voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-40	
Emitter-Base Voltage	V_{EBO}	V	I_E=-100uA, I_C=0	-5	
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=-40V		-100
Collector-Emitter cut-off current	I_{CEO}	nA	V_{CE}=-30V		-100
Base-emitter Cut-off Current	I_{EBO}	nA	V_{EB}=-5V		-100
DC Current Gain	h_{FE}		I_C=-1mA V_{CE}=-5V	300	
			I_C=-500mA V_{CE}=-5V	215	
			I_C=-1A V_{CE}=-5V	145	
			I_C=-2A V_{CE}=-5V	55	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}1$	mV	I_C=-100mA I_B=-5mA		-140
	$V_{CE(sat)}2$	mV	I_C=-500mA I_B=-50mA		-170
	$V_{CE(sat)}3$	mV	I_C=-1A I_B=-100mA		-310
	$V_{CE(sat)}4$	mV	I_C=-2A I_B=-200mA		-630
Equivalent On-Resistance	$R_{CE(sat)}$	mΩ	I_C=-1A I_B=-100mA		310
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	I_C=-1A I_B=-100mA		-1.2
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	V	I_C=-1A V_{CE}=-5V		-1.1
Transition frequency	f_T	MHz	I_C=-100mA,V_{CE}=-10V,f=100MHz	100	
Collector Capacitance	Cob	pF	VCB=-10V,IE=0, f=1MHz		28

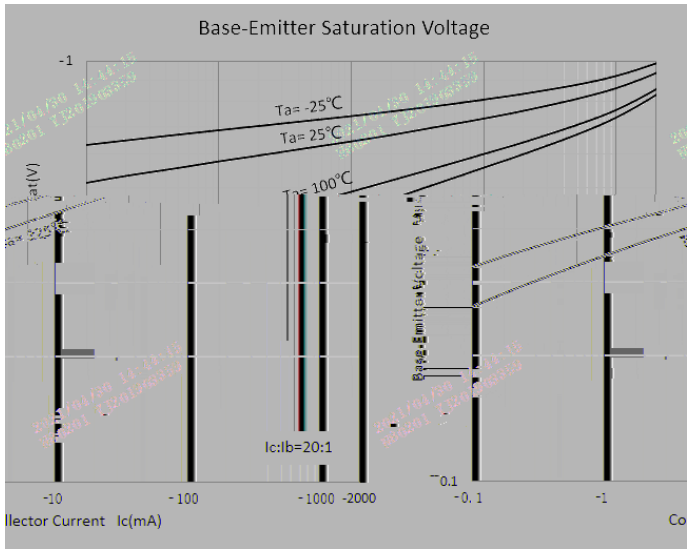
■ (Example)

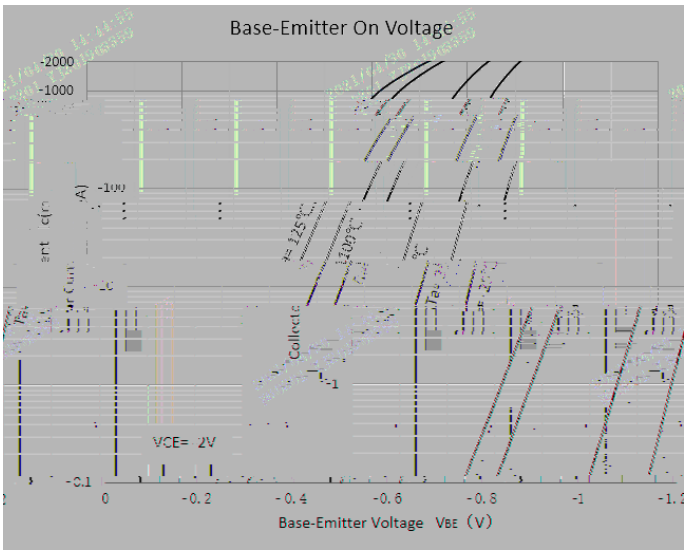
■ (Typical)

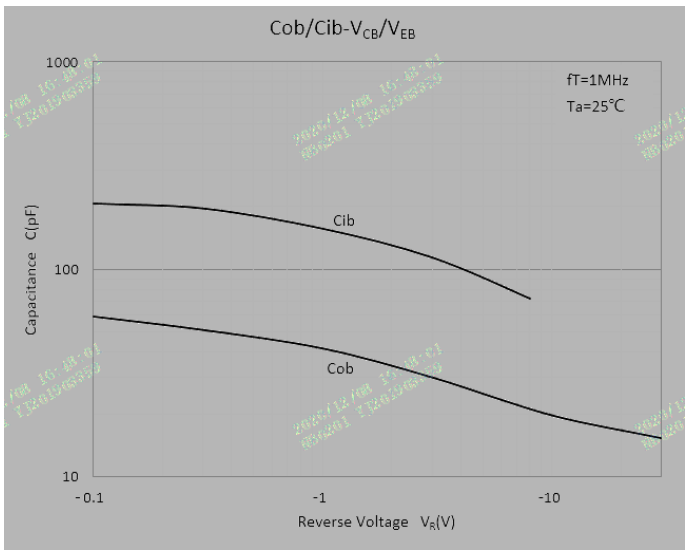

Static Characteristic
Ta=25℃
- 10mA
- 9mA
- 8mA
- 7mA
- 6mA
- 5mA
- 4mA
- 3mA
Collect-Emitter Voltage

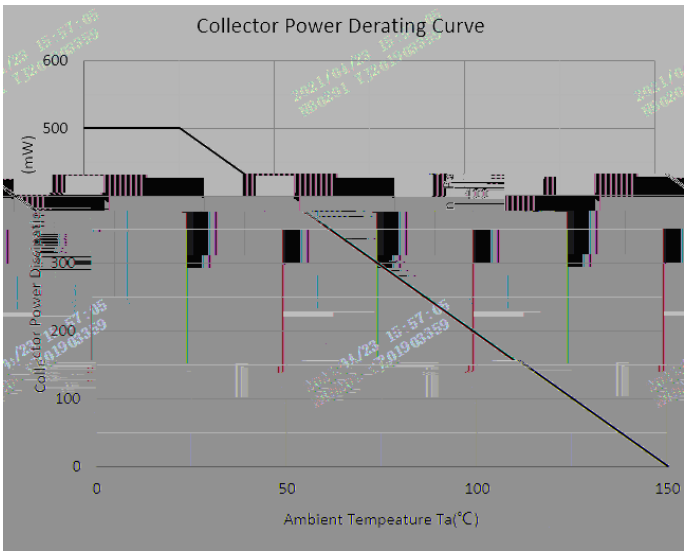

DC Current Gain
VCE= -2V
Ta= 125℃
Ta= 100℃
Ta= -25℃
DC Current
Collector Current Ic(mA)


Collector-Emitter Saturation Voltage
Ic:Ib=20:1
Ta= 100℃
Ta= -25℃
Collector-Emitter Voltage
Collector Current Ic(mA)

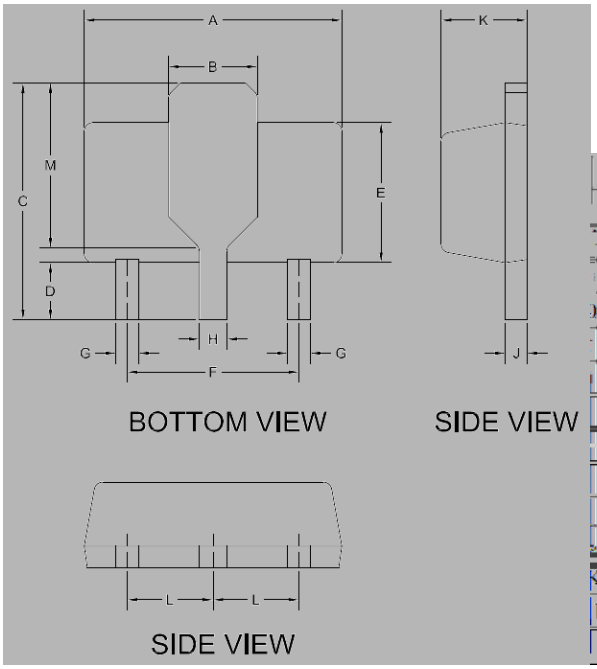

Base-Emitter Saturation Voltage
Ta= -25℃
Ta= 25℃
Ta= 100℃
Ic:Ib=20:1
Collector Current Ic(mA)


Base-Emitter On Voltage
VCE= 2V
Base-Emitter Voltage VBE (V)


Cob/Cib-VCB/VEB
fT=1MHz
Ta=25℃
Cib
Cob
Capacitance C(pF)
Reverse Voltage VR(V)

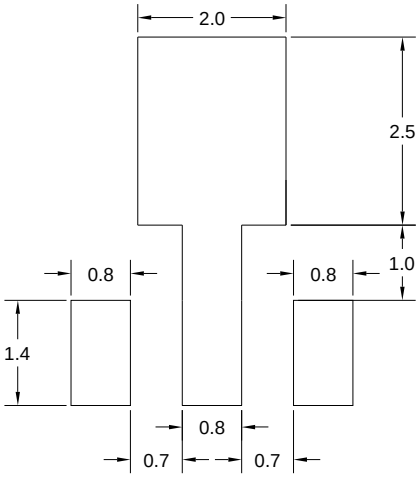


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DIMENSIONS

DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX
A	0.173	0.181	4.400	4.600
B	0.061 TYP		1.550 TYP	
C	0.155	0.167	3.940	4.250
D	0.031	0.047	0.800	1.200
F	0.094	0.102	2.400	2.600
E	0.118 TYP		3.000 TYP	
G	0.014	0.019	0.360	0.480
H	0.018	0.022	0.460	0.560
K	0.055	0.063	1.400	1.600
J	0.059 TYP		1.500 TYP	
M	0.108 TYP		2.750 TYP	



UNIT:MM

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with o ip ´ en H