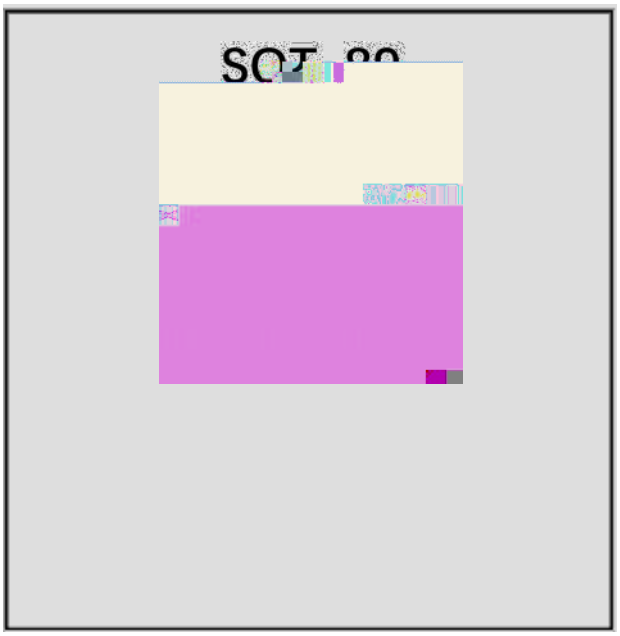
PNP General Purpose Amplifier



Features

- 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

Mechanical Data

- **Package**: SOT-89

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:S48

■Maximum Ratings (Ta=25 unless otherwise noted)

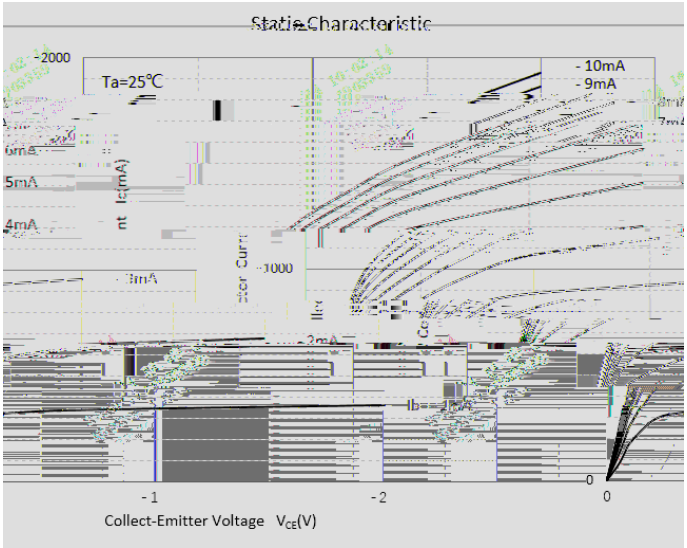
Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	I_C=-10mA, I_B=0	-40
Minimum Collector-Base Voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-40
Minimum Emitter-Base Voltage	V_{EBO}	V	I_E=-100uA, I_C=0	-5
Collector Current	I_C	A		-2
Collector Power Dissipation	P_C	mW		500
Thermal Resistance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

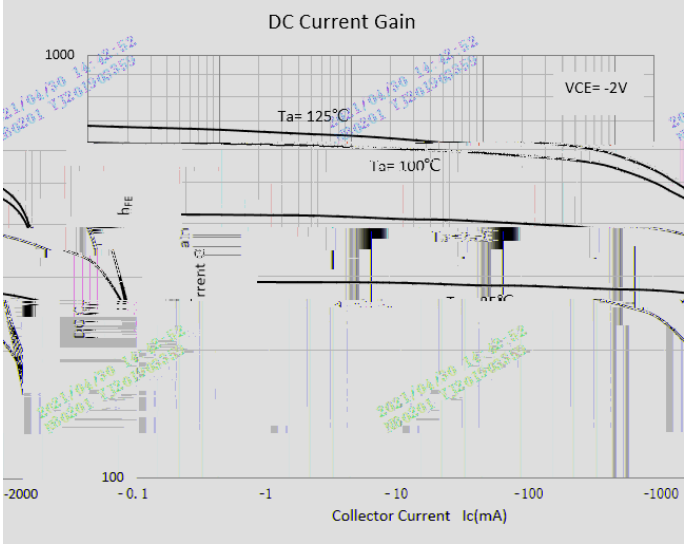
■Electrical Characteristics (Ta=25 unless otherwise noted)

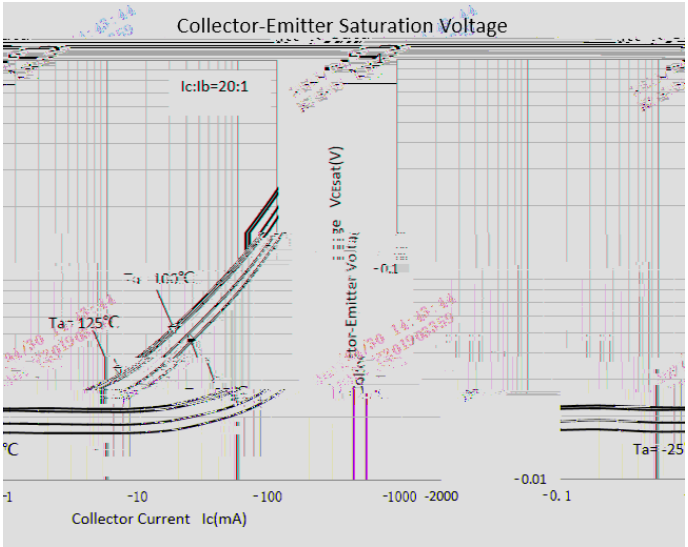
Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	V_{CEO}	V	I_C=-10mA, I_B=0	-40	
Collector-Base Voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-40	
Emitter-Base Voltage	V_{EBO}	V	I_E=-100uA, I_C=0	-5	
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=-40V		-100
Collector-Emitter cut-off current	I_{CEO}	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

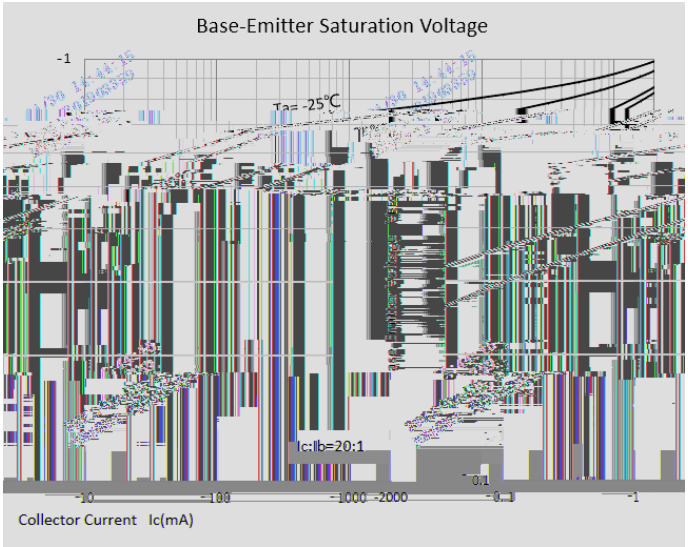
■Ordering Information (Example) v

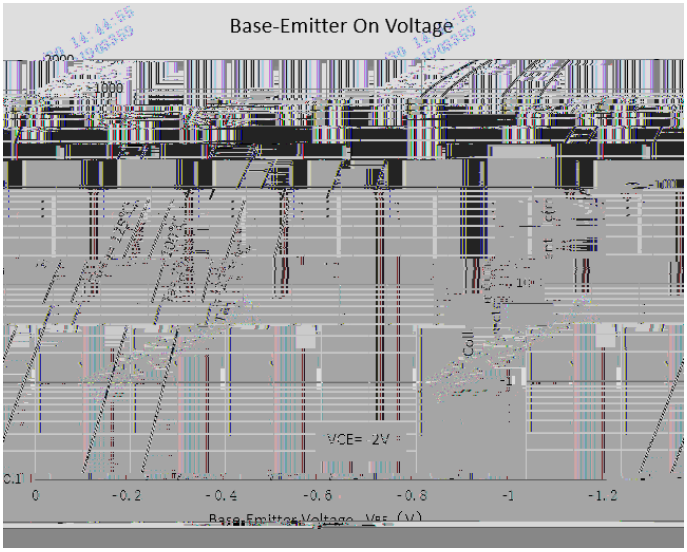
■**Characteristics** (Typical)

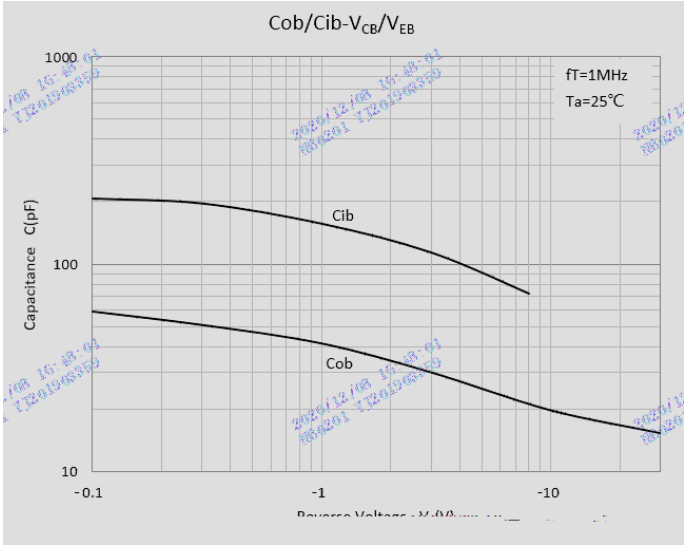


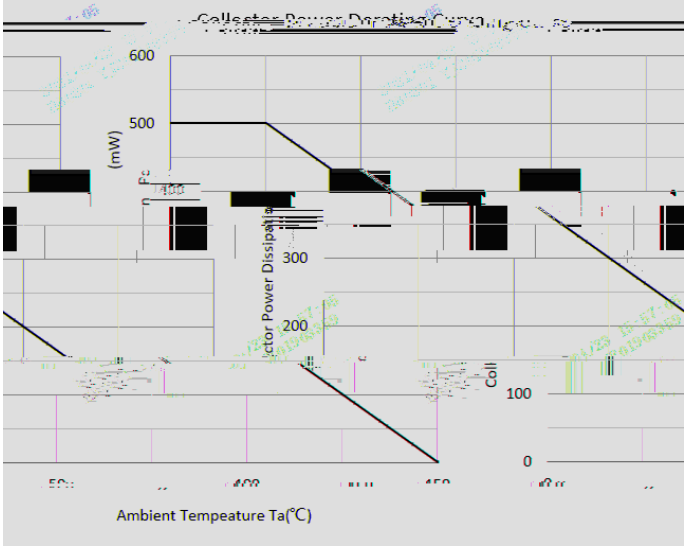




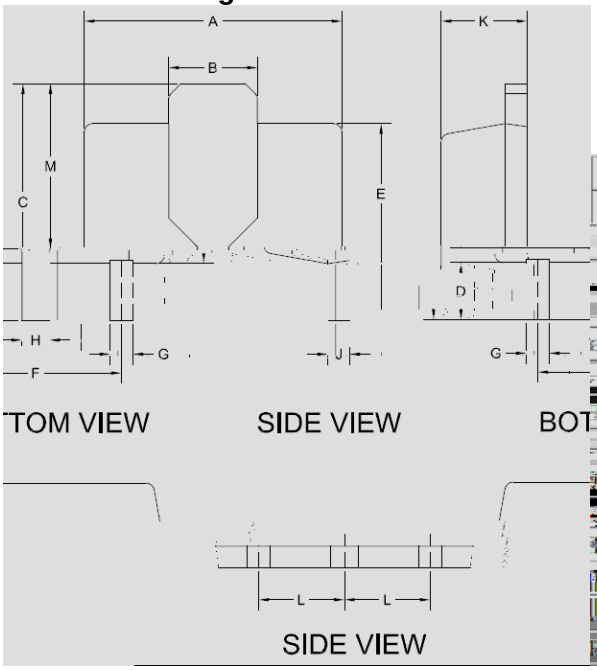






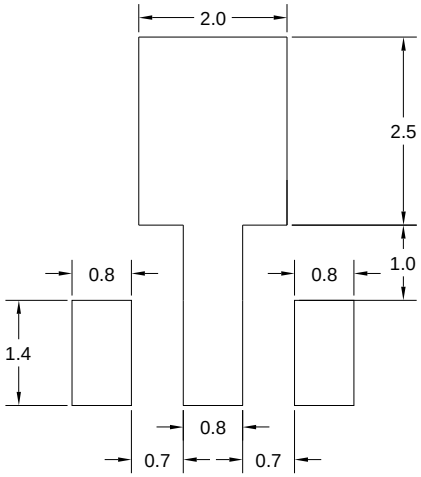


■SOT-89 Package Outline Dimensions



DIMENSIONS				
	INCHES		MM	
DIM.	MIN	MAX	MIN	MAX
4.400	4.600	A	0.173	0.181
1.550 TYP		B	0.061 TYP	
3.940	4.250	C	0.155	0.167
0.800	1.200	D	0.031	0.047
2.400	2.600	E	0.094	0.102
3.00 TYP		F	0.118 TYP	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.063	1.400	1.600	K	
0.059 TYP		1.500 TYP		
M	0.108 TYP		2.750 TYP	

■SOT-89 Suggested Pad Layout



UNIT:MM

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