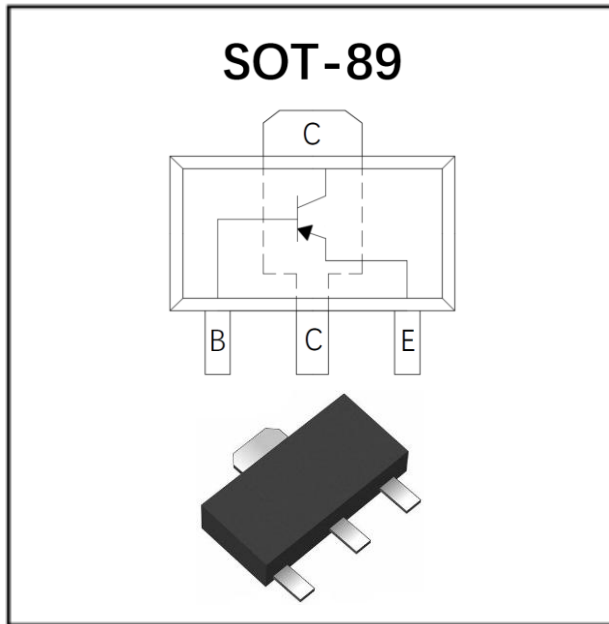


PNP General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture 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:** 3100X

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

Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	$I_C = -1mA, I_B = 0$	-100
Minimum Collector-Base Voltage	V_{CBO}	V	$I_C = -100\mu A, I_E = 0$	-120
Minimum Emitter-Base Voltage	V_{EBO}	V	$I_E = -100\mu A, I_C = 0$	-5
Collector Current	I_C	A		-3
Peak Collector current	I_{CM}	A	single pulse, $t_p \leq 1ms$	-5
Power dissipation	$P_D^{(1)}$	mW		550
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	°C/W		225
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	°C/W		182
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150

Note: (1) Device mounted on an FR4 Printed-Circuit Board (PCB), 35 μm single-sided copper, tin-plated and standard footprint



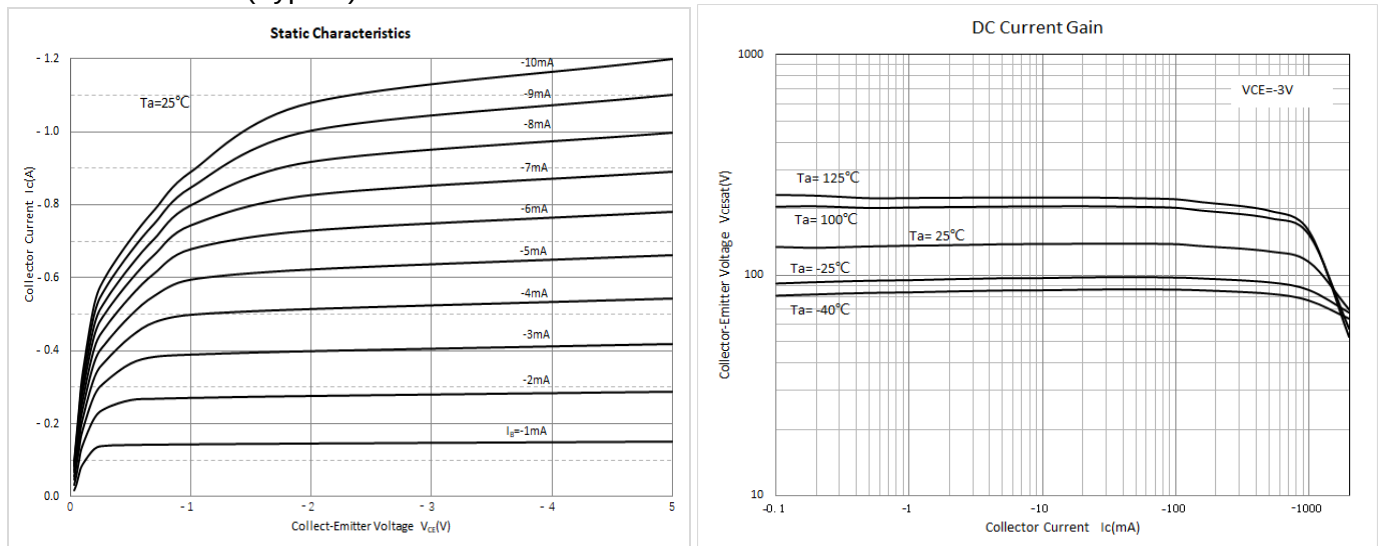
■Electrical Characteristics (Ta=25°C unless otherwise noted)

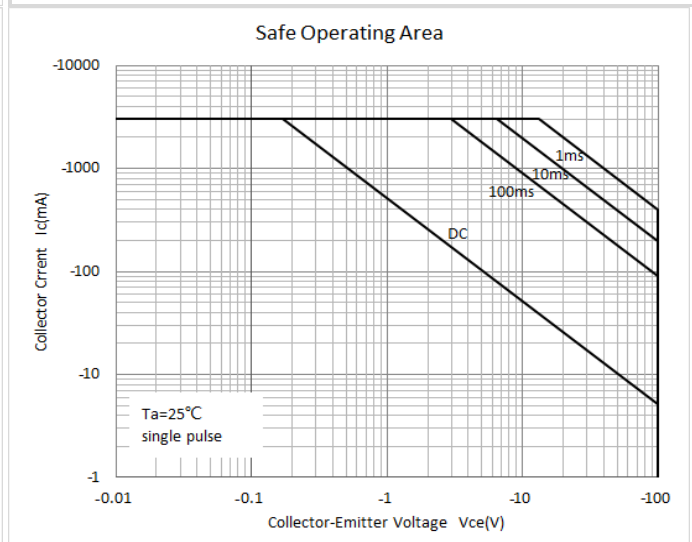
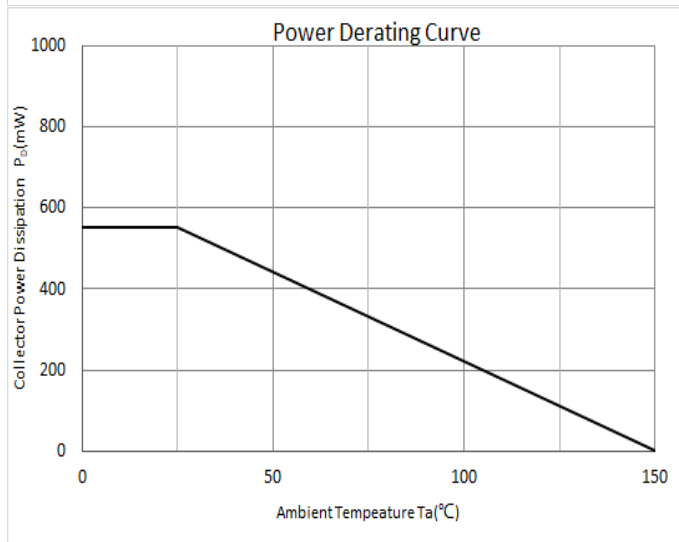
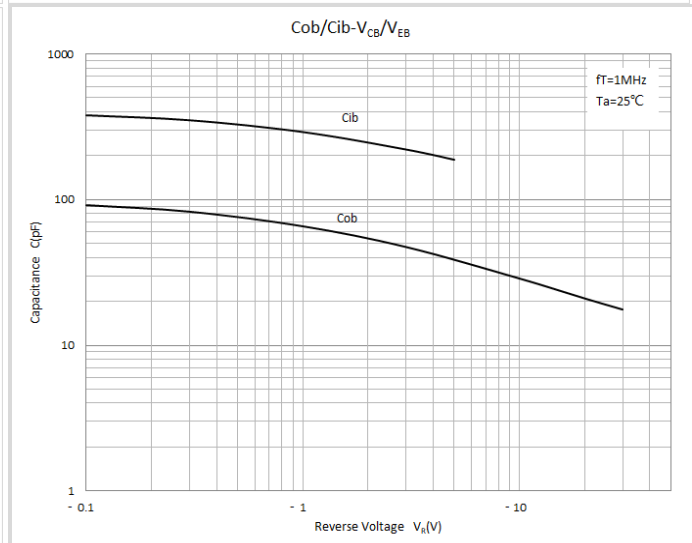
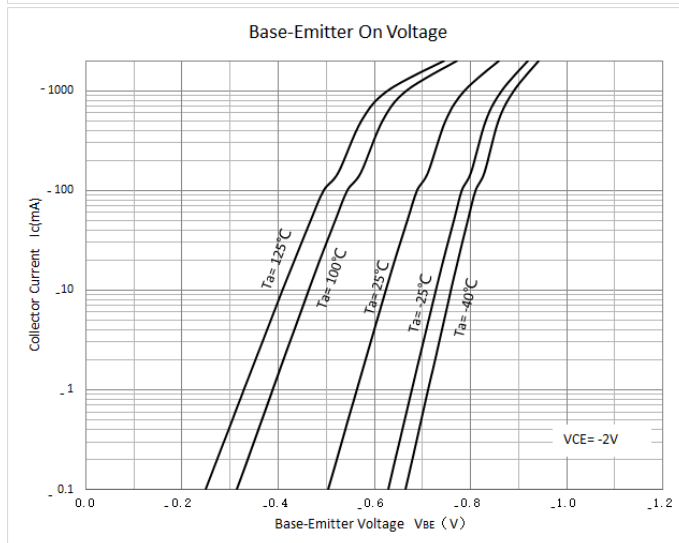
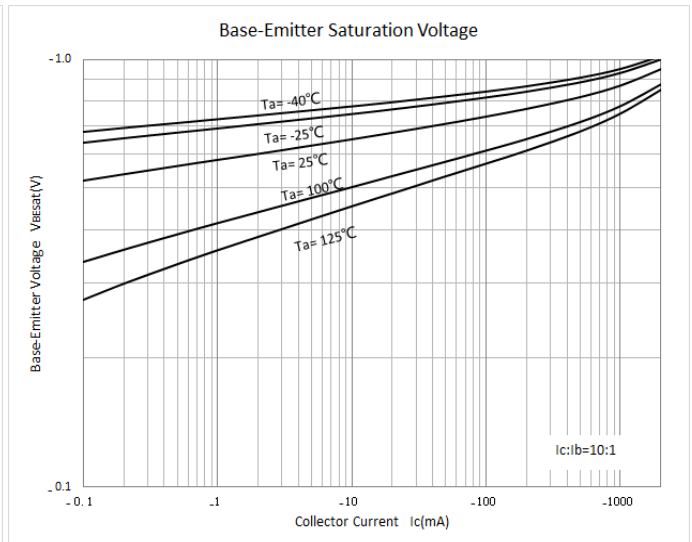
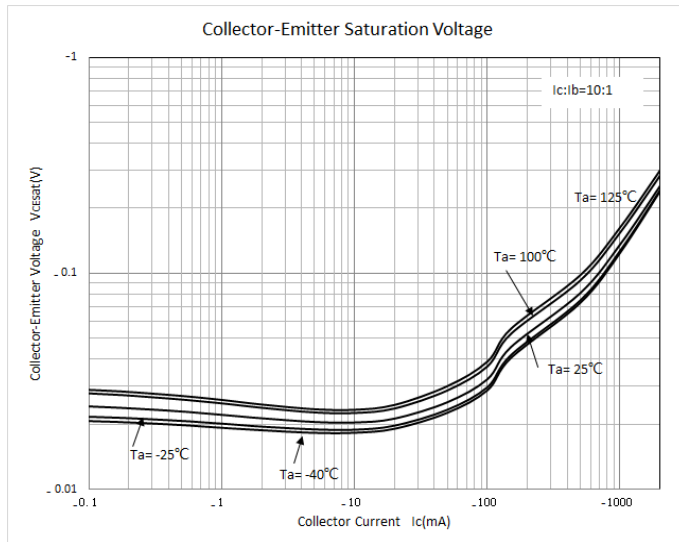
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-Emitter Voltage	V_{CEO}	V	$I_C=-1mA, I_B=0$	-100		
Collector-Base Voltage	V_{CBO}	V	$I_C=-100\mu A, I_E=0$	-120		
Emitter-Base Voltage	V_{EBO}	V	$I_E=-100\mu A, I_C=0$	-5		
Collector-base Cut-off Current	I_{CBO}	nA	$V_{CB}=-120V$			-100
Collector-Emitter Cut-off Current	I_{CEO}	μA	$V_{CE}=-100V$			-5
Base-emitter Cut-off Current	I_{EBO}	nA	$V_{EB}=-5V$			-100
DC Current Gain	h_{FE}		$I_C=-100mA, V_{CE}=-3V$	120		270
			$I_C=-10mA, V_{CE}=-5V$	25		
			$I_C=-0.5A, V_{CE}=-1V$	85		475
			$I_C=-1A, V_{CE}=-2V$	15		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-2A, I_B=-0.2A$			-0.5
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-2A, I_B=-0.2A$			-1.3
Transition frequency	f_T	MHz	$I_C=-100mA, V_{CE}=-5V$	30		
Collector Capacitance	C_{ob}	pF	$V_{CB}=-10V, I_E=0, f=1MHz$		30	

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJTP3100X	F2	Approximate 0.055	1000	8000	32000	7" reel

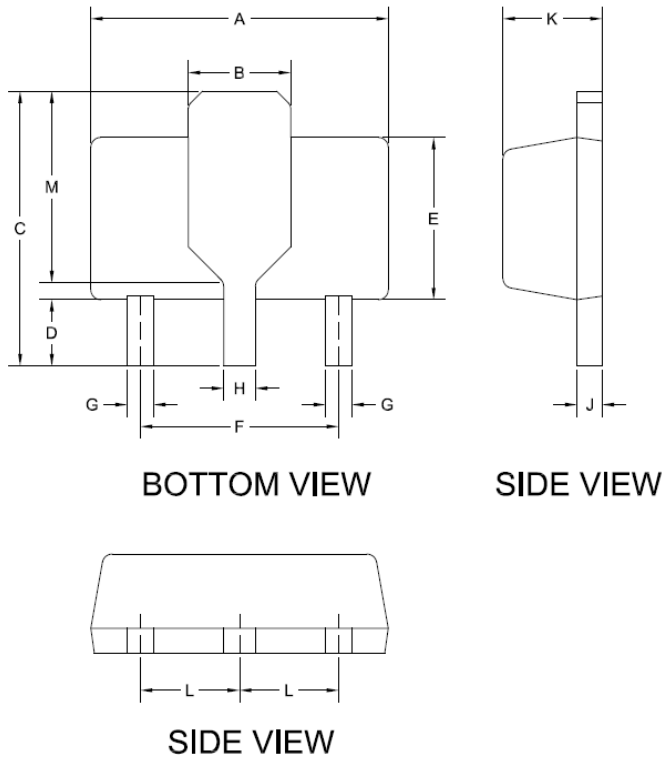
■Characteristics (Typical)



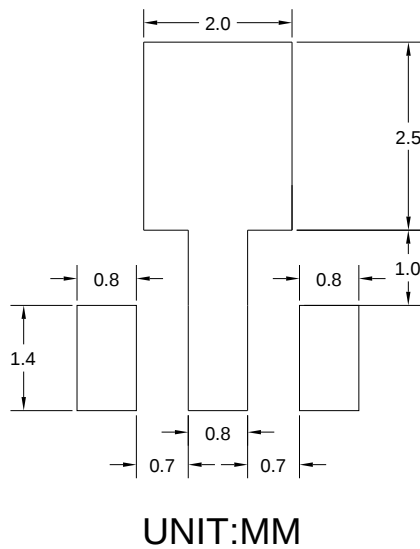




■SOT-89 Package Outline Dimensions



■SOT-89 Suggested Pad Layout





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