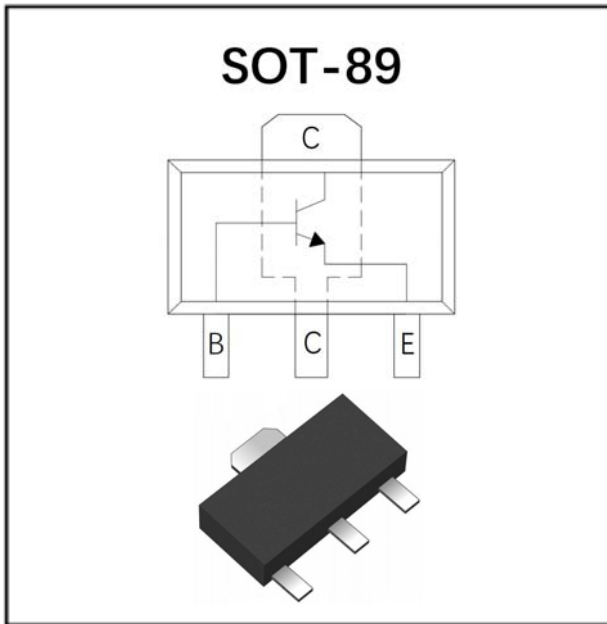


NPN General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- High-speed switching

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:** 1P

■ Maximum Ratings (Ta=25°C 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	$I_C=10uA, I_E=0$	75
Minimum Emitter-Base Voltage	V_{EBO}	V	$I_E=10uA, I_C=0$	6
Collector Current	I_C	mA		600
Collector Power Dissipation	P_C	mW		500
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		250
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150



PXT2222A

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

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CEO}	V	$I_C=10mA, I_B=0$	40		
Collector-Base Voltage	V_{CBO}	V	$I_C=10\mu A, I_E=0$	75		
Emitter-Base Voltage	V_{EBO}	V	$I_E=10\mu A, I_C=0$	6		
Base cut-off current	I_{BL}	nA	$V_{CE}=60V, V_{EB}=3V$			20
Collector-Emitter cut-off current	I_{CEX}	nA	$V_{CE}=60V, V_{EB}=3V$			10
DC Current Gain	h_{FE1}		$I_C=0.1mA, V_{CE}=10V$	35		
	h_{FE2}		$I_C=1mA, V_{CE}=10V$	50		
	h_{FE3}		$I_C=10mA, V_{CE}=10V$	75		
	h_{FE4}		$I_C=150mA, V_{CE}=10V$	100		300
	h_{FE5}		$I_C=150mA, V_{CE}=1V$	50		
	h_{FE6}		$I_C=500mA, V_{CE}=10V$	40		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=150mA, I_B=15mA$			0.3
			$I_C=500mA, I_B=50mA$			1
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=150mA, I_B=15mA$	0.6		1.2
			$I_C=500mA, I_B=50mA$			2
Transition Frequency	f_T	MHz	$I_C=20mA, V_{CE}=20V, f=100MHz$	300		
Output Capacitance	Cobo	pF	$V_{CB}=10V, f=1MHz, I_E=0$			8
Input Capacitance	Cibo	pF	$V_{EB}=0.5V, f=1MHz, I_C=0$			25
Noise Figure	NF	dB	$V_{CE}=10V, I_C=0.1mA, R_s=1K\Omega, f=1KHz$			4
Delay Time	td	ns	$I_C=150mA, I_{B1}=-I_{B2}=15mA$			10
Rise Time	tr	ns				25
Storage Time	ts	ns				225
Fall Time	tf	ns				60

■Ordering Information (Example)

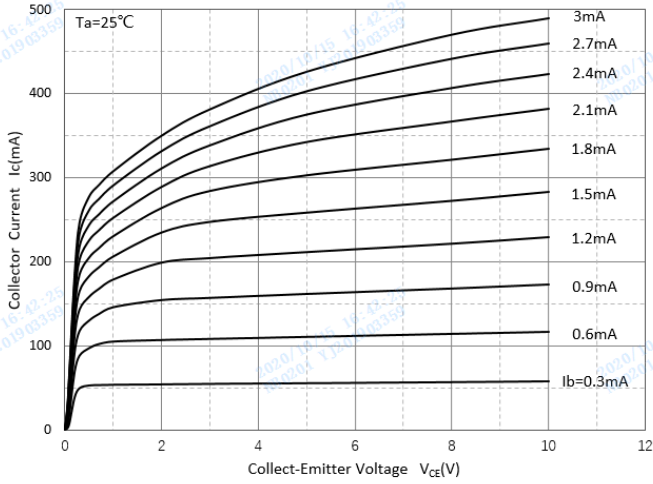
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PXT2222A	F2	Approximate 0.055	1000	8000	32000	7" reel



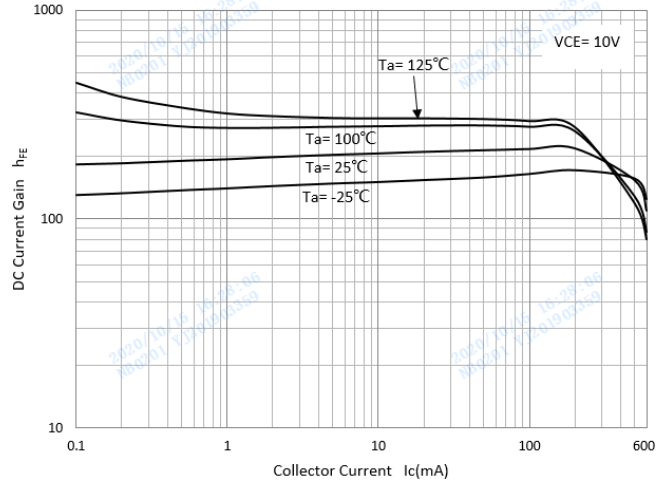
PXT2222A

Characteristics (Typical)

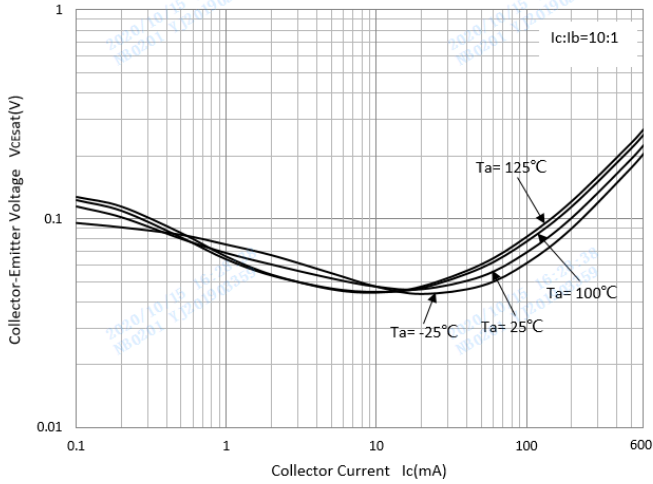
Static Characteristic



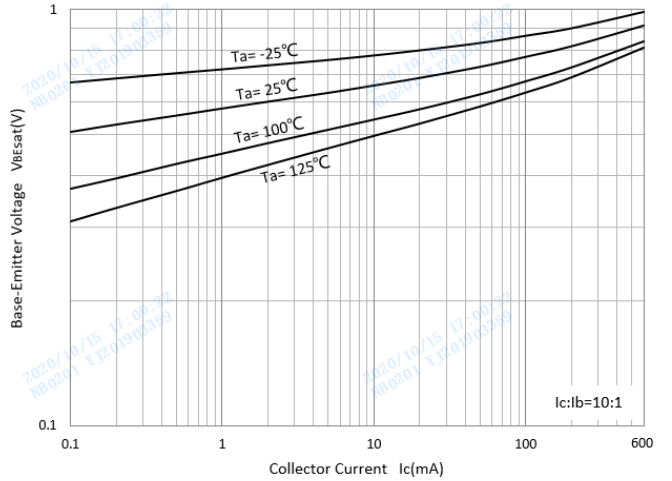
DC Current Gain



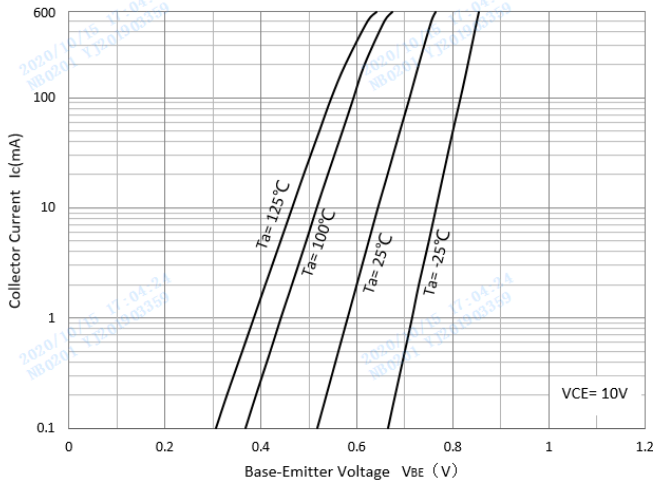
Collector-Emittor Saturation Voltage



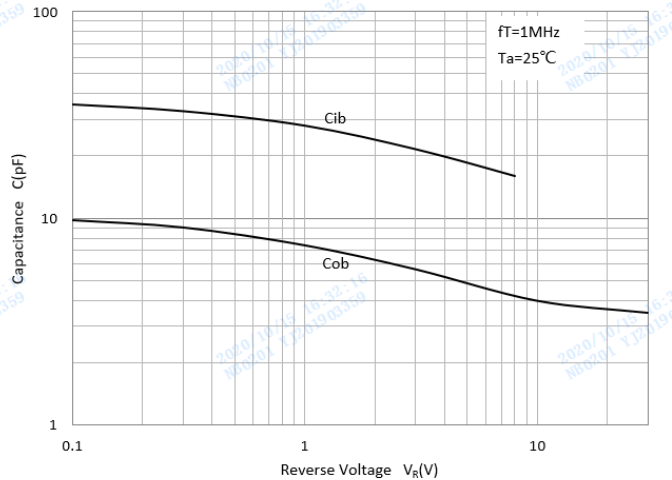
Base-Emittor Saturation Voltage



Base-Emittor On Voltage



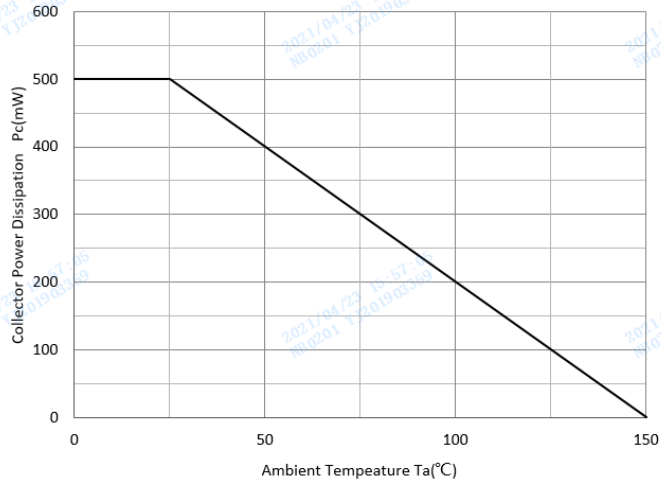
$C_{ob}/C_{ib}-V_{CB}/V_{EB}$



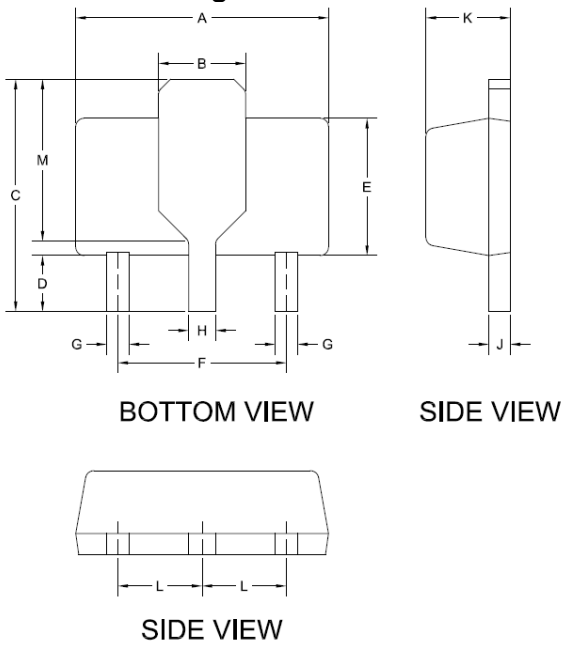


PXT2222A

Collector Power Derating Curve

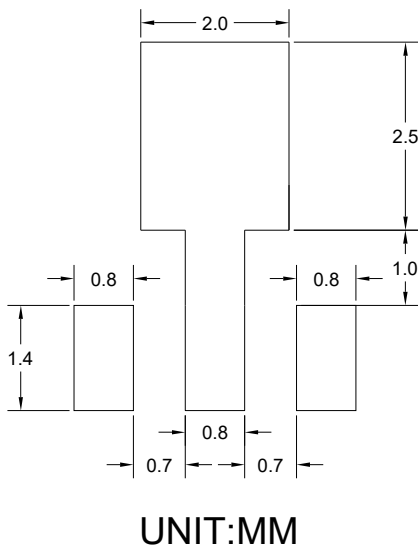


SOT-89 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN.	MAX.	MIN.	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
E	0.094	0.102	2.400	2.600
F	0.118 TYP.		3.00 TYP.	
G	0.014	0.019	0.360	0.480
H	0.017	0.022	0.440	0.560
J	0.014	0.017	0.350	0.440
K	0.055	0.063	1.400	1.600
L	0.059 TYP.		1.500 TYP.	
M	0.108 TYP.		2.750 TYP.	

SOT-89 Suggested Pad Layout





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