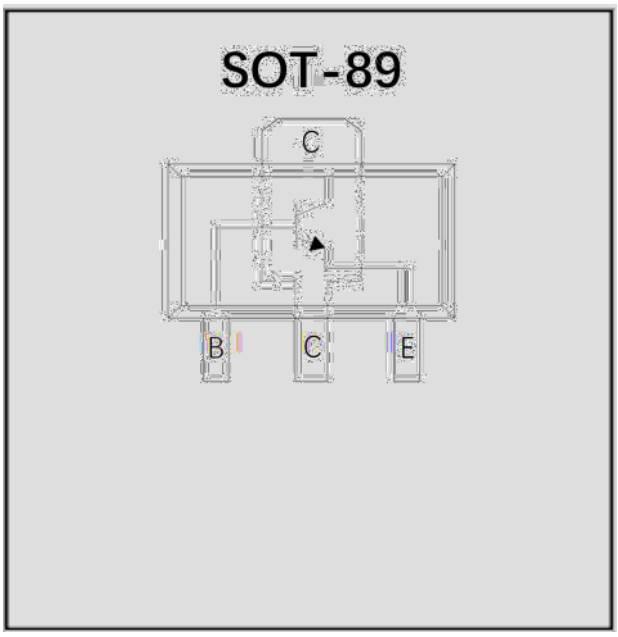
NPN General Purpose Amplifier



Features

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

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: Y1

■Maximum Ratings (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	I_C=100uA, I_B=0	25
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		1.5
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

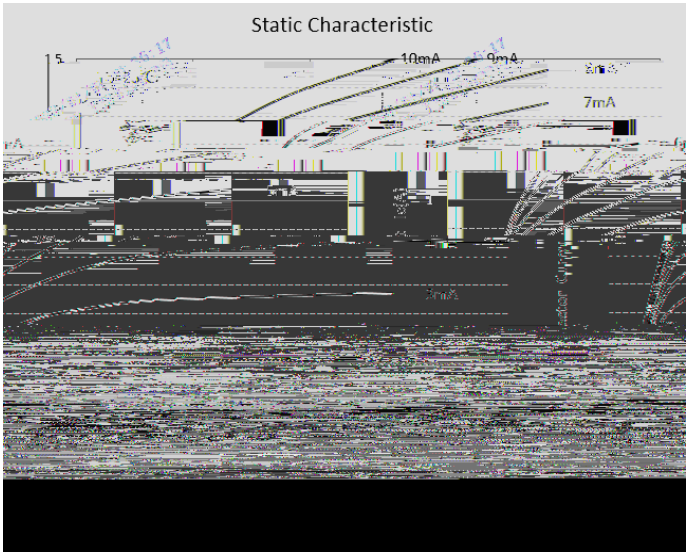
■Electrical Characteristics (Ta=25 unless otherwise noted)

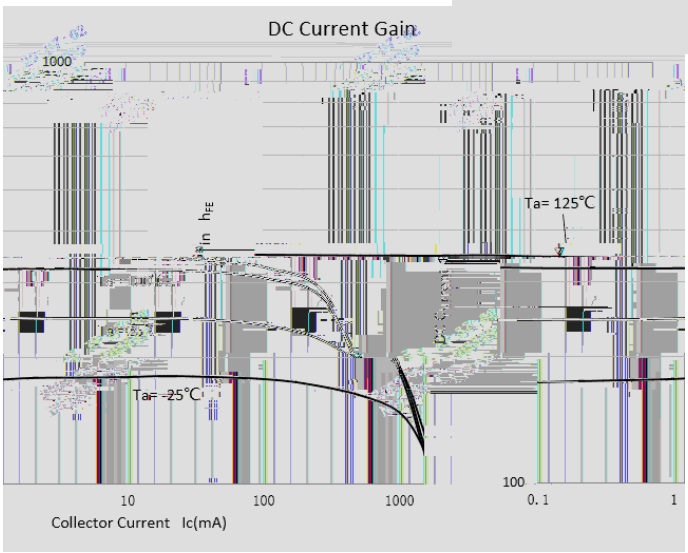
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CEO}	V	I_C=100uA, I_B=0	25		
Collector-Base Voltage	V_{CBO}	V	I_C=100uA, I_E=0	40		
Emitter-Base Voltage	V_{EBO}	V	I_E=100uA, I_C=0	5		
Collector-Base cut-off current	I_{CBO}	nA	V_{CB}=40V, I_E=0			100
Collector-Emitter cut-off current	I_{CEO}	nA	V_{CE}=20V, I_B=0			100
Emitter-Base cut-off current	I_{EBO}	nA	V_{EB}=5V, I_C=0			100
DC Current Gain	$h_{FE}1$		I_C=100mA, V_{CE}=1V	160		300
	$h_{FE}2$		I_C=800mA, V_{CE}=1V	40		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C=800mA, I_B=80mA			0.5
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	I_C=800mA, I_B=80mA	0.6		1.2
Base-Emitter Positive Favor Voltage	V_{BEF}	V	I_B=1A			1.55
Transition Frequency	f_T	MHz	I_C=50mA, V_{CE}=10V,f=30MHz	100		
Output Capacitance	Cobo	pF	V_{CB}=10V, f=1MHz, I_E=0			15

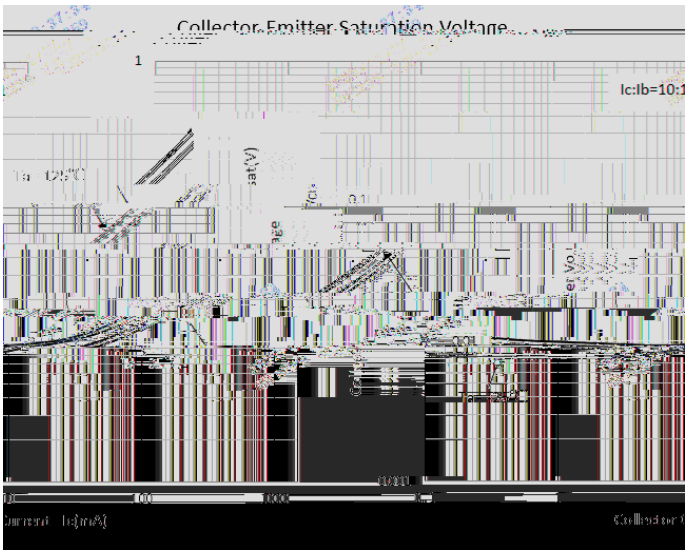
■Ordering Information (Example)

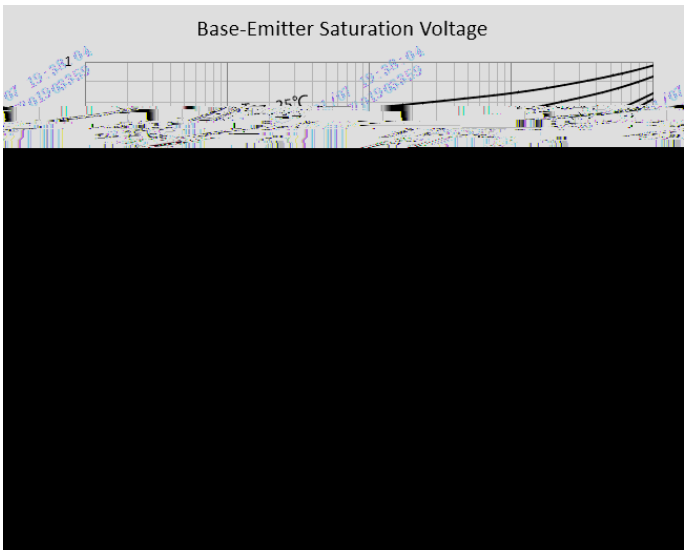
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PXT8050-D	F2	Approximate 0.055	1000	8000	32000	7” reel

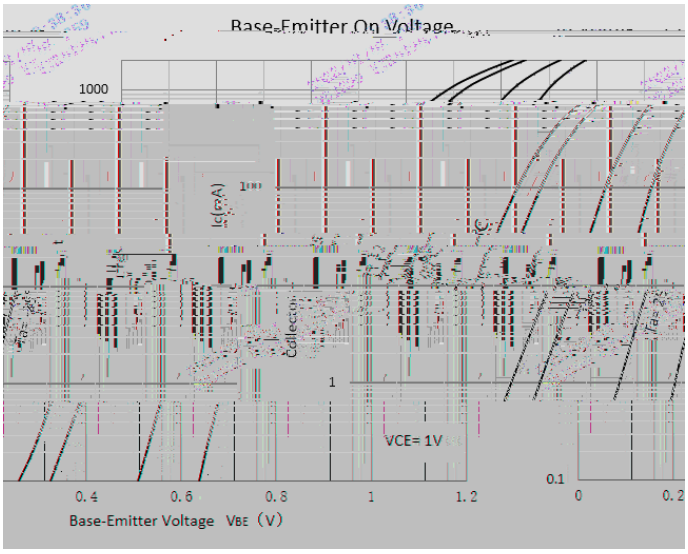
■Characteristics (Typical)

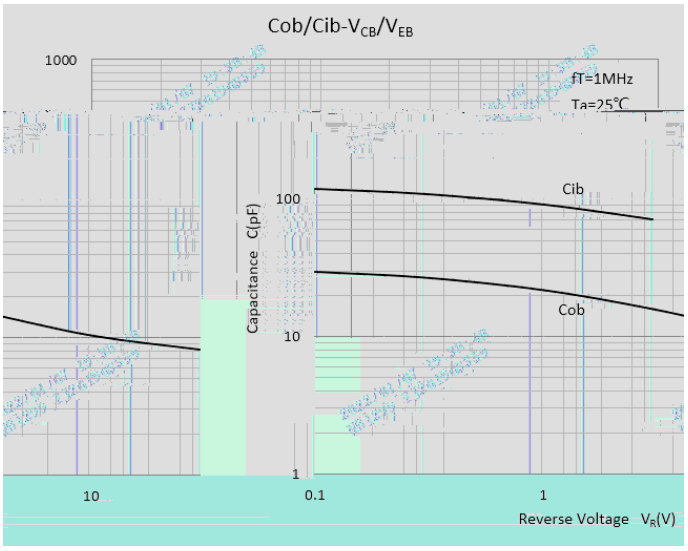


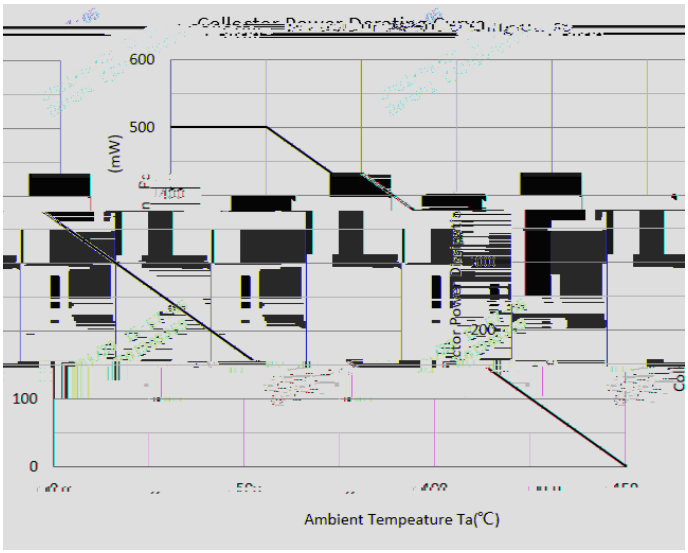



Collector-Emitter Saturation Voltage
Ic:Ib=10:1

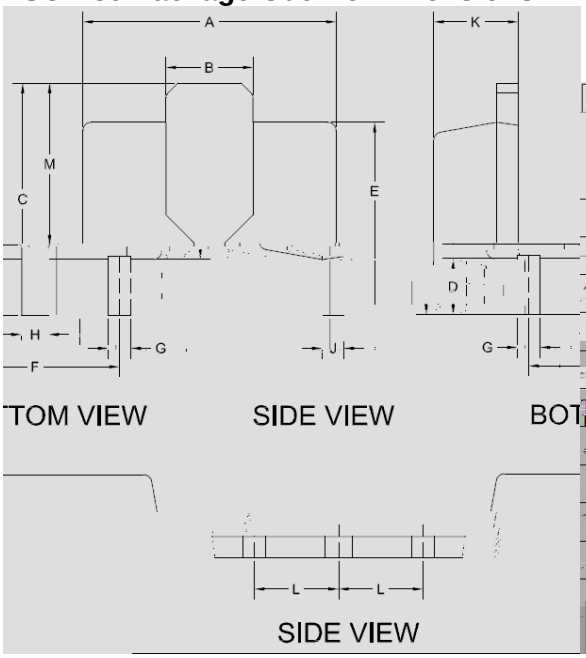

Base-Emitter Saturation Voltage


Base-Emitter On Voltage
1000
VCE= 1V
0.1
0.4
0.6
0.8
1
1.2
0
0.2
Base-Emitter Voltage VBE（V）


Cob/Cib-VCB/VEB
1000
fT=1MHz
Ta=25℃
Cib
Cob
100
10
1
Capacitance C(pF)
10
0.1
1
Reverse Voltage VR(V)

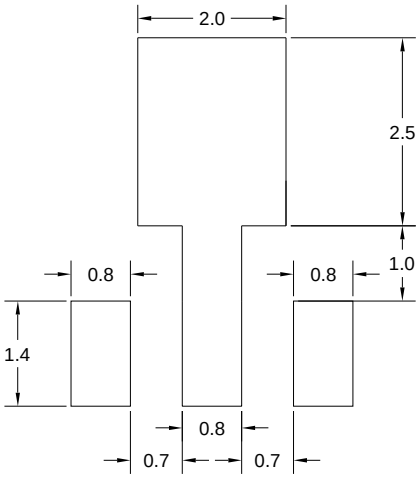

600
500
(mW)
200
100
0
Ambient Tempeature Ta(℃)

■SOT-89 Package Outline Dimensions



DIMENSIONS				
DIM	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
D	0.059	0.067	1.500	1.700
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	0.059	0.067	1.500	1.700
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



UNIT:MM

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