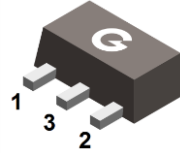
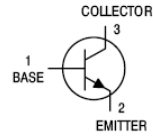


Features

- Epitaxial planar die construction
- High current
- Low voltage
- Complement to PXT4403
- RoHS compliant with Halogen-free

HF



SOT-89

Mechanical Data

- Case: SOT-89
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
PXT4401	SOT-89	1000 pcs / Tape & Reel	2X

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Breakdown Voltage	V _{CEO}	40	V
Emitter-Base Breakdown Voltage	V _{EBO}	6	V
Collector Current (Continuous)	I _C	0.6	A
Collector Current (Peak)	I _{CM}	0.8	A
Base Current (Continuous)	I _B	0.15	A
Base Current (Peak)	I _{BM}	0.2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	0.5	W
Thermal Resistance Junction-to-Air ^{*1}	R _{θJA}	100	°C/W
Thermal Resistance Junction-to-Case ^{*1}	R _{θJC}	45	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	R _{θJL}	10	°C/W
Ambient Temperature	T _A	-55 ~ +150	°C
Operating Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 35\text{V}, I_E = 0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	-	0.1	μA
Collector Cut-off Current	I_{CEX}	$V_{CE} = 35\text{V}, V_{EB(OFF)} = 0.4\text{V}$	-	-	0.1	μA
Base Cut-off Current	I_{BL}	$V_{CE} = 35\text{V}, V_{EB(OFF)} = 0.4\text{V}$	-	-	0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 0.1\text{mA}$	20	-	-	-
		$V_{CE} = 1\text{V}, I_C = 1\text{mA}$	40	-	-	-
		$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	80	-	-	-
		$V_{CE} = 1\text{V}, I_C = 150\text{mA}$	100	-	300	-
		$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	40	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150\text{mA}, I_B = 15\text{mA}$	-	-	0.4	V
		$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	-	0.75	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 150\text{mA}, I_B = 15\text{mA}$	0.75	-	0.95	V
		$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	-	1.2	V
Base-Emitter Voltage	$V_{BE(on)}$	$I_C = 500\text{mA}, V_{CE} = 2\text{V}$	-	-	1.2	V
Current-Gain—Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 20\text{mA}$ $f = 100\text{MHz}$	250	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 5\text{V}, I_E = 0, f = 1\text{MHz}$	-	-	6.5	pF
Delay Time	t_d	$V_{CC} = 30\text{V}, I_C = 150\text{mA}$	-	-	15	ns
Rise Time	t_r	$V_{BE(OFF)} = 2\text{V}, I_{B1} = 15\text{mA}$	-	-	20	ns
Storage Time	t_s	$V_{CC} = 30\text{V}, I_C = 150\text{mA}$	-	-	225	ns
Fall Time	t_f	$I_{B1} = I_{B2} = 15\text{mA}$	-	-	30	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

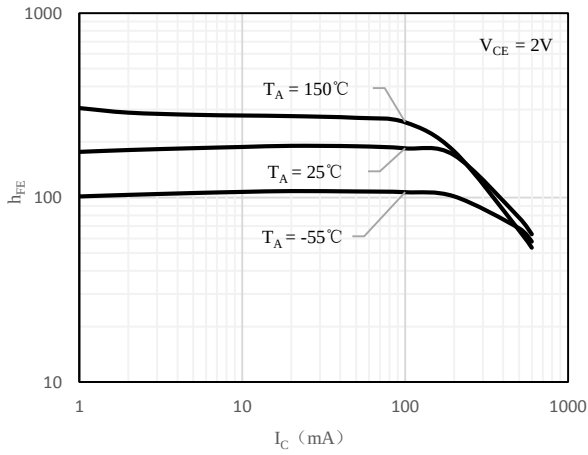


Fig 1 h_{FE} vs. I_C

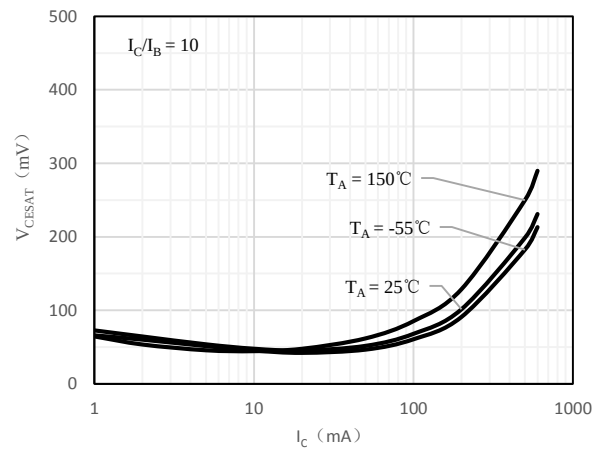


Fig 2 $V_{CE(sat)}$ vs. I_C

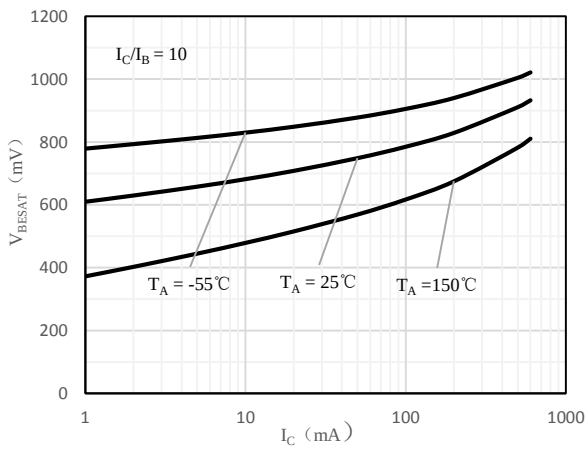


Fig 3 $V_{BE(sat)}$ vs. I_C

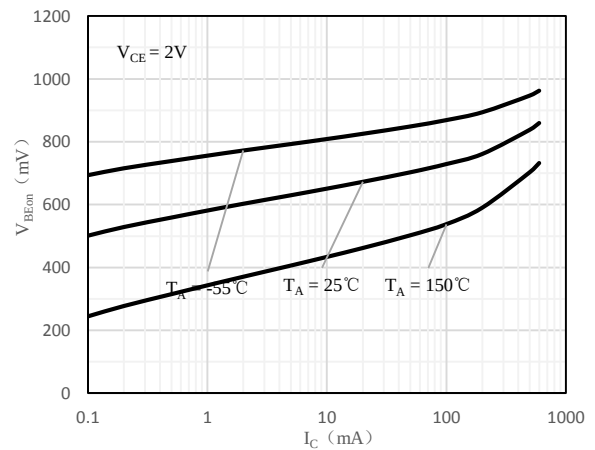


Fig 4 $V_{BE(on)}$ vs. I_C

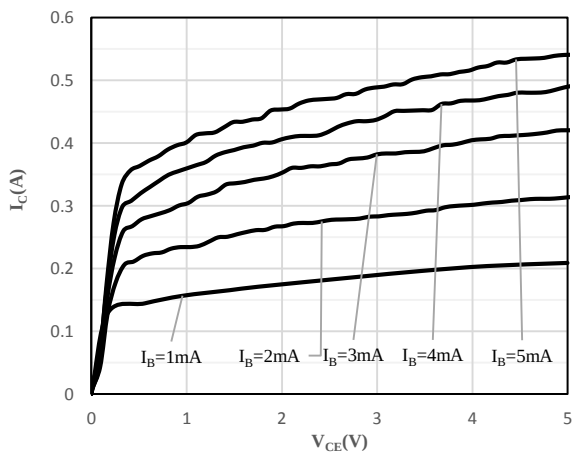


Fig 5 I_C vs. V_{CE}

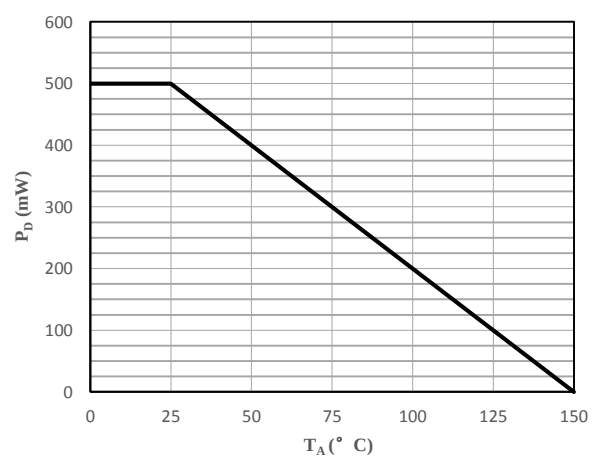


Fig 6 P_D vs. T_A

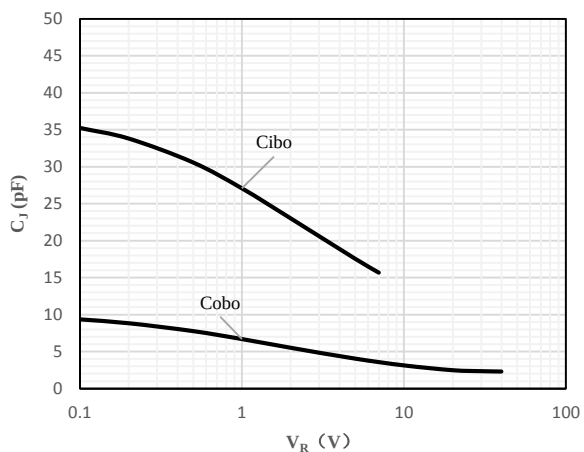
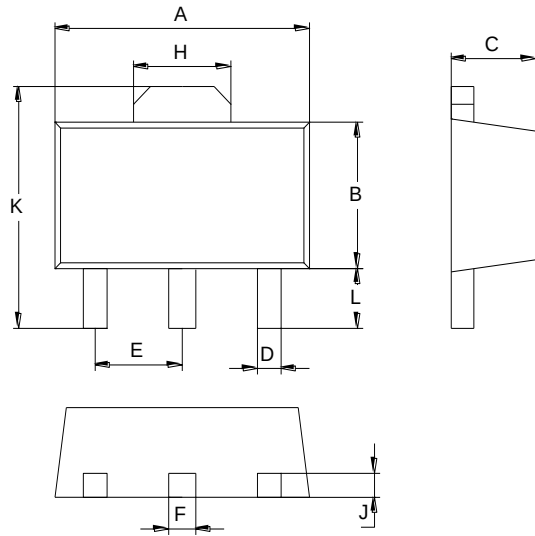


Fig 7 C_J vs. V_R

Package Outline Dimensions (Unit: mm)



SOT-89		
Dimension	Min.	Max.
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35

Mounting Pad Layout (Unit: mm)

SOT-89

