NPN Switching Transistor PXT3904

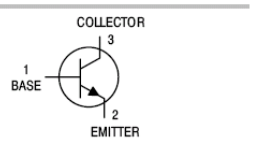
FEATURES

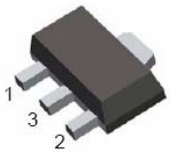
- High current.
- Low voltage.

Lead-free

APPLICATIONS

- High-speed switching.





SOT-89

ORDERING INFORMATION

Type No.	Marking	Package Code
PXT3904	1A	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Unit**
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	100	mA
I_{CM}	Peak Collector Current	200	mA
I_{BM}	Peak Base Current	100	mA
P_{tot}	Total Power Dissipation	0.45	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA ,I_B=0	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=30V, I_E=0		50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=6V,I_C=0		50	nA
DC current gain	h_{FE}	V_{CE}=1V, I_C=0.1mA V_{CE}=1V, I_C=1mA V_{CE}=1V, I_C=10mA V_{CE}=1V, I_C=50mA V_{CE}=1V, I_C=100mA	60 80 100 60 30	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA ,I_B=1mA I_C=50mA ,I_B=5mA		0.2 0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA I_C=50mA ,I_B=5mA	0.65	0.85 0.95	V
Transition frequency	f_T	V_{CE}=20V,I_C=10mA, f=100MHz	300		MHz
Collector Capacitance	C_c	V_{CB}=5V, f=1MHz ,I_E=0		4	pF
Emitter Capacitance	C_e	V_{EB}=0.5V, f=1MHz ,I_C=0		8	pF
Noise Figure	F	I_C=100uA,V_{CE}=5V,R_S=1kΩ F=10Hz to 7.5kHz		5	dB

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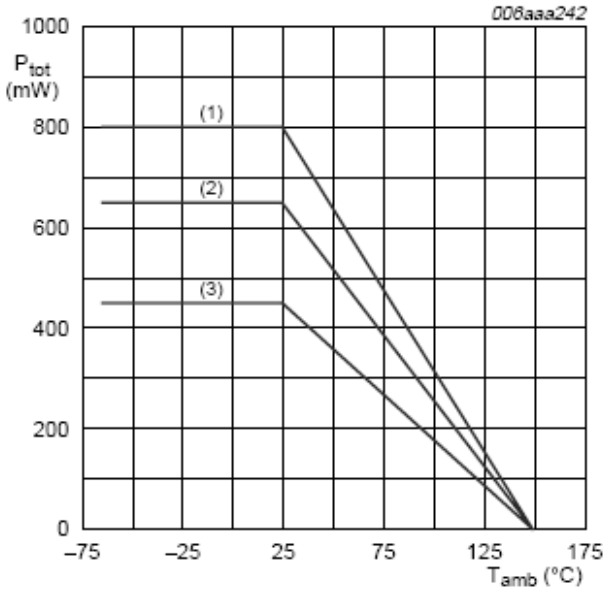
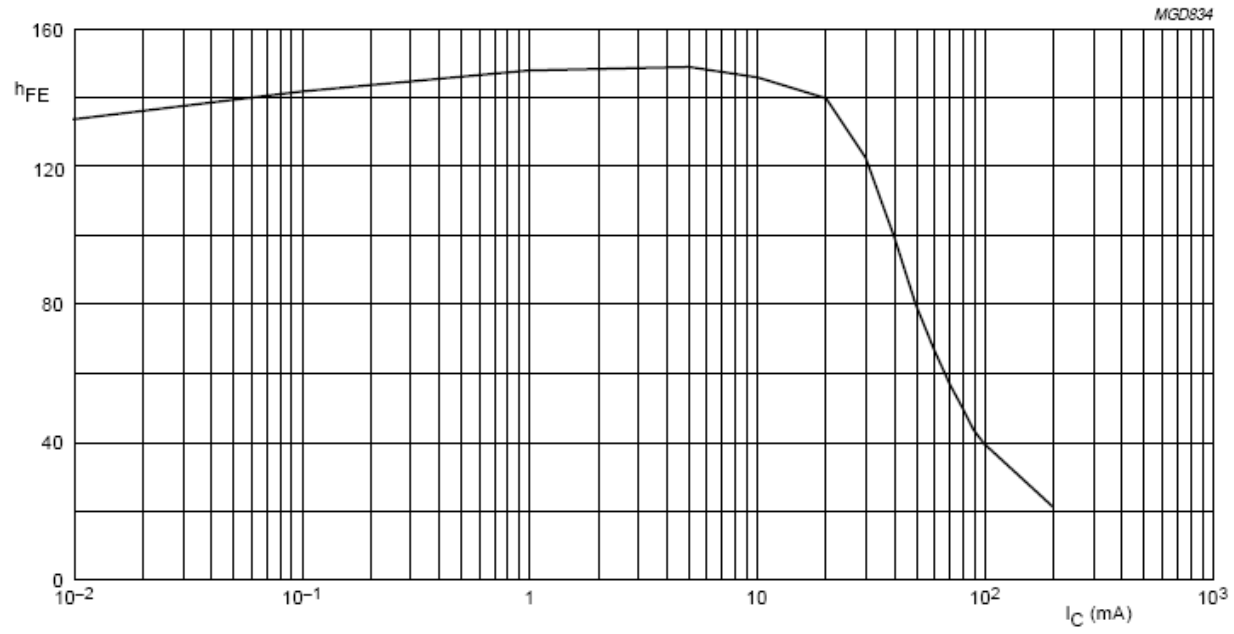
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



(1) FR4 PCB; 6 cm^2 mounting pad for collector.
(2) FR4 PCB; 1 cm^2 mounting pad for collector.
(3) FR4 PCB; standard footprint.

Power derating curves.



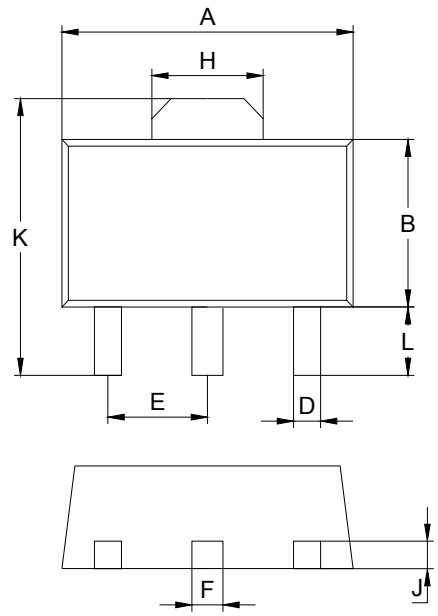
V_{CE} = 1 V.

DC current gain; typical values.

NPN Switching Transistor PXT3904

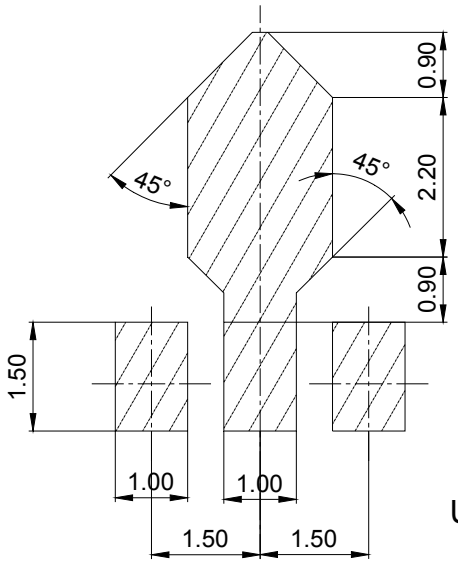
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.50 Typical	
D	0.40 Typical	
E	1.40	1.60
F	0.48 Typical	
H	1.60	1.80
J	0.40 Typical	
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
PXT3904	SOT-89	1000/Tape&Reel