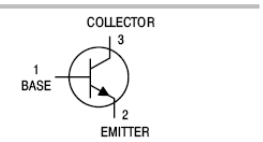
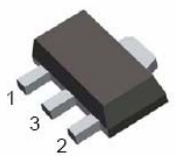
Silicon NPN epitaxial planar type 2SD1119

FEATURES

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory operation performances at high efficiency with the low-voltage power supply.

Lead-free





SOT-89

ORDERING INFORMATION

Type No.	Marking	Package Code
2SD1119	TQ/TR	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Unit**
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	3	A
I_{CP}	Peak Collector Current	5	A
P_C	Collector power dissipation	1	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55 to +150	℃

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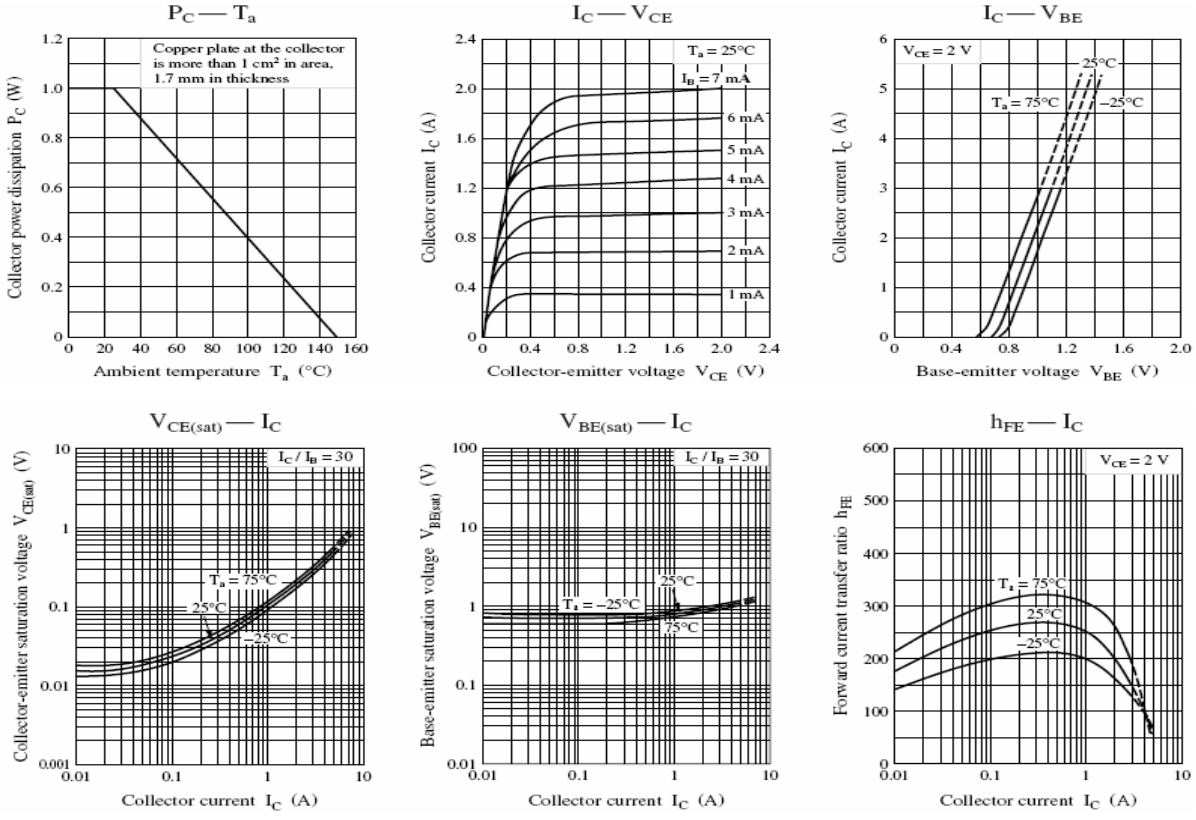
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA ,I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=10V, I_E=0			0.1	uA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C/I_B=3A/0.1A			1	V
DC current gain(note)	h_{FE}	V_{CE}=2V, I_C=0.5A	230		600	
		V_{CE}=2V, I_C=2A	150			
Current gain bandwidth product	f_T	V_{CE}=6V,I_C=50mA, f=200MHz		150		MHz
Output Capacitance	C_{ob}	V_{CB}=20V, f=1MHz ,I_E=0A			50	pF

CLASSIFICATION OF h_{FE2}

RANK	Q	R
RANGE	230-380	340-600
MARKING	TQ	TR

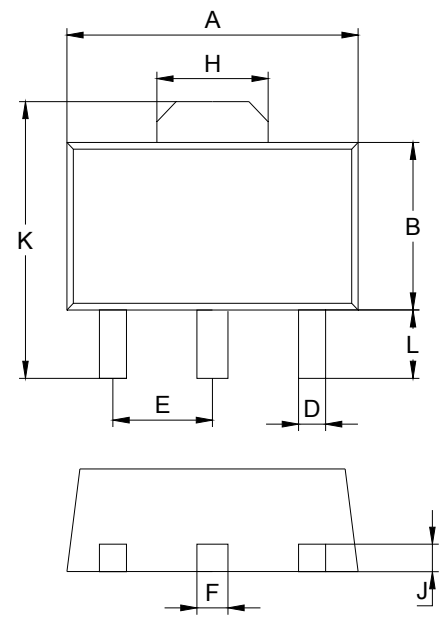
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



Silicon NPN epitaxial planar type 2SD1119

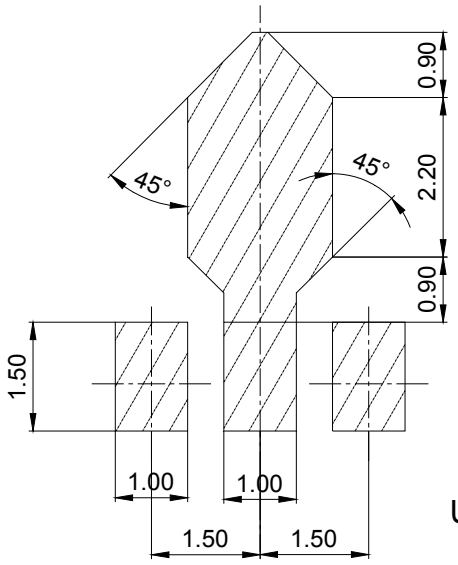
PACKAGE OUTLINE

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
2SD1119	SOT-89	1000/Tape&Reel