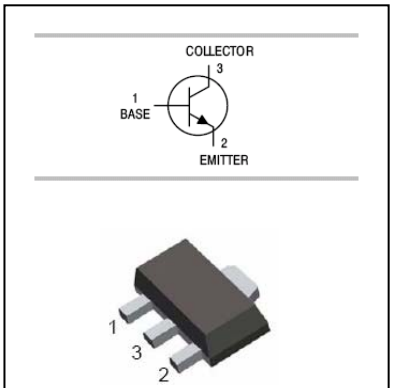
High Voltage Fast Switching NPN Power Transistor

3DD13002

FEATURES

- P_C=1W(Mounted on ceramic substrate).
- High speed switching.
- Small flat package.

Lead-free



SOT-89

APPLICATIONS

- High voltage switch mode application.

ORDERING INFORMATION

Type No.	Marking	Package Code
3DD13002	13002	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Units**
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Dissipation	1.25	W
T_j,T_{stg}	Junction and 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-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	600			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=600V,I_E=0			100	μA
Emitter cut-off current	I_{EBO}	V_{EB}=6V,I_C=0			100	μA
DC current gain	h_{FE}	V_{CE}=10V,I_C=200mA V_{CE}=10V,I_C=250uA	9 5		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=200mA, I_B= 40mA			0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=200mA, I_B= 40mA			1.1	V
Transition frequency	f_T	V_{CE}=10V, I_C=100mA, f=1MHz	5			MHz
Fall time	t_f	I_C=1A,I_{B1}=I_{B2}=0.2A, V_{CC}=100V			0.5	μS
Storage time	t_s				2.5	μS

CLASSIFICATION OF $h_{FE(1)}$

Range	9-15	15-20	20-25	25-30	30-35	35-40

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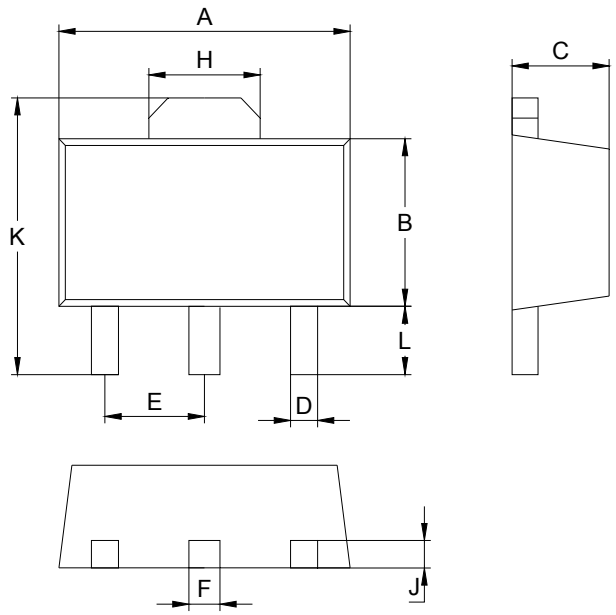
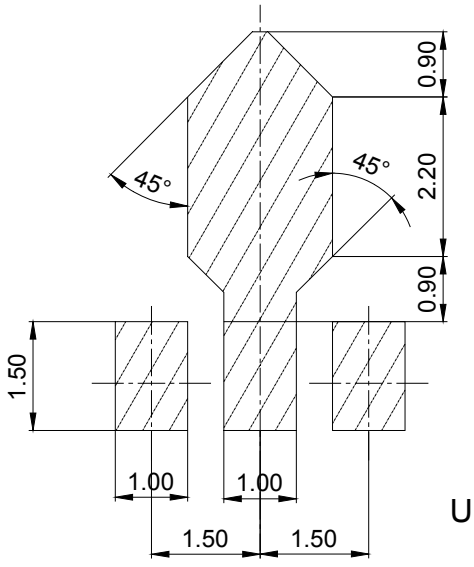
PACKAGE OUTLINE

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
3DD13002	SOT-89	1000/Tape&Reel