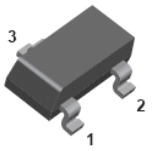
3DD13001

SOT-23 Bipolar Transistor(NPN)

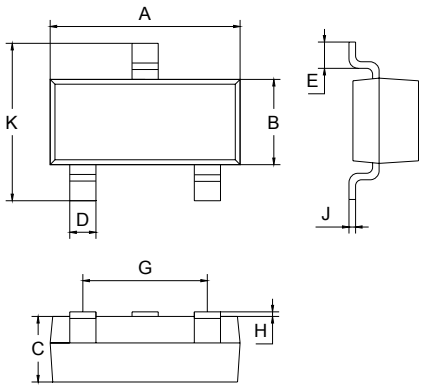


FEATURES

- P_C=350mW(Mounted on ceramic substrat
- High speed switching.
- Small flat package.

APPLICATIONS

- High voltage switch mode application.



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

SOT-23

ORDERING INFORMATION

Type No.	Marking	Package Code
3DD13001	13001	SOT-23

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	7	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Dissipation	350	mW
T_j,T_{stg}	Junction and Storage Temperature	-55 to +150	℃

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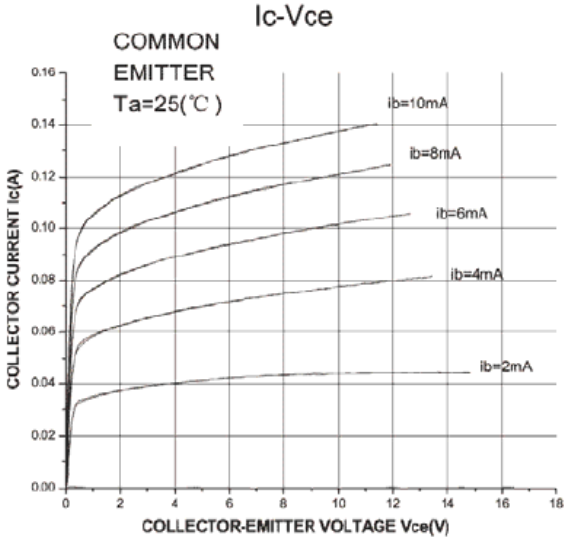
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

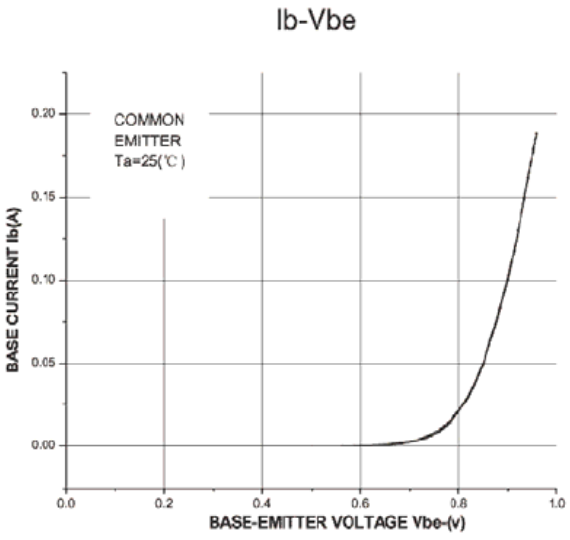
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	600			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=600V,I_E=0			100	μA
Collector cut-off current	I_{CEO}	V_{CE}=400V,I_B=0			200	μA
Emitter cut-off current	I_{EBO}	V_{EB}=7V,I_C=0			100	μA
DC current gain	h_{FE}	V_{CE}=20V,I_C=20mA V_{CE}=10V,I_C=0.25A	10 5		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B= 10mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA, I_B= 10mA			1.2	V
Transition frequency	f_T	V_{CE}=20V, I_C=20mA, f=1MHz	8			MHz
Fall time	t_f	I_C=50mA,I_{B1}=I_{B2}=5mA, V_{CC}=45V			0.3	μS
Storage time	t_s				1.5	μS

CLASSIFICATION OF $h_{FE(1)}$

Range	10-15	15-20	20-25	25-30	30-35	35-40

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified





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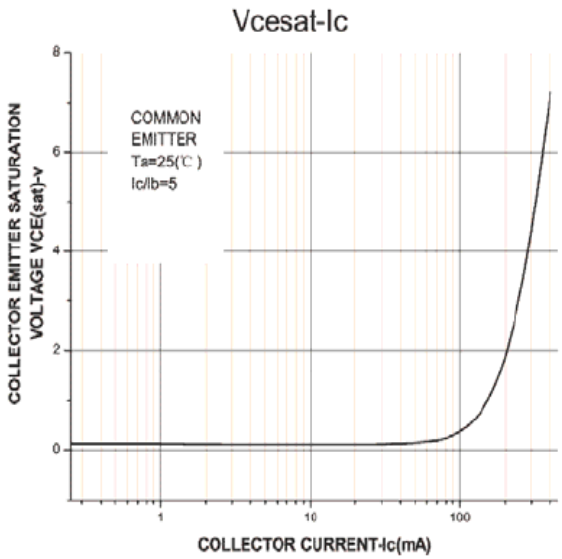

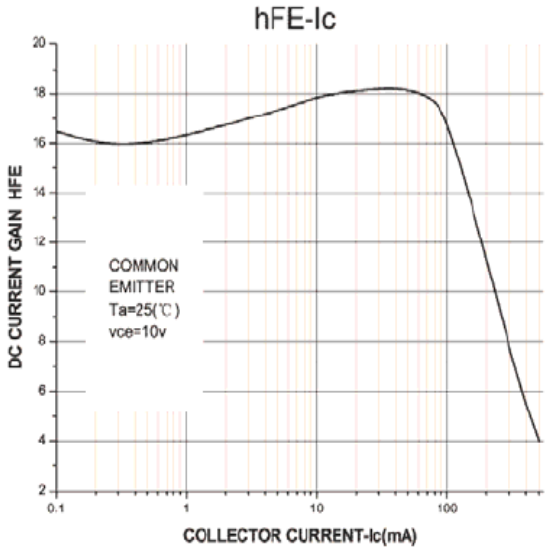

Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT-23	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220