

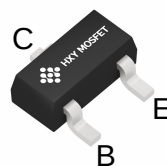


Features

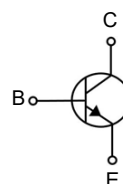
- Power switching applications

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
DI13001	SOT-23	8D	3000



SOT-23



Maximum Ratings (Ta=25°C unless otherwise noted)

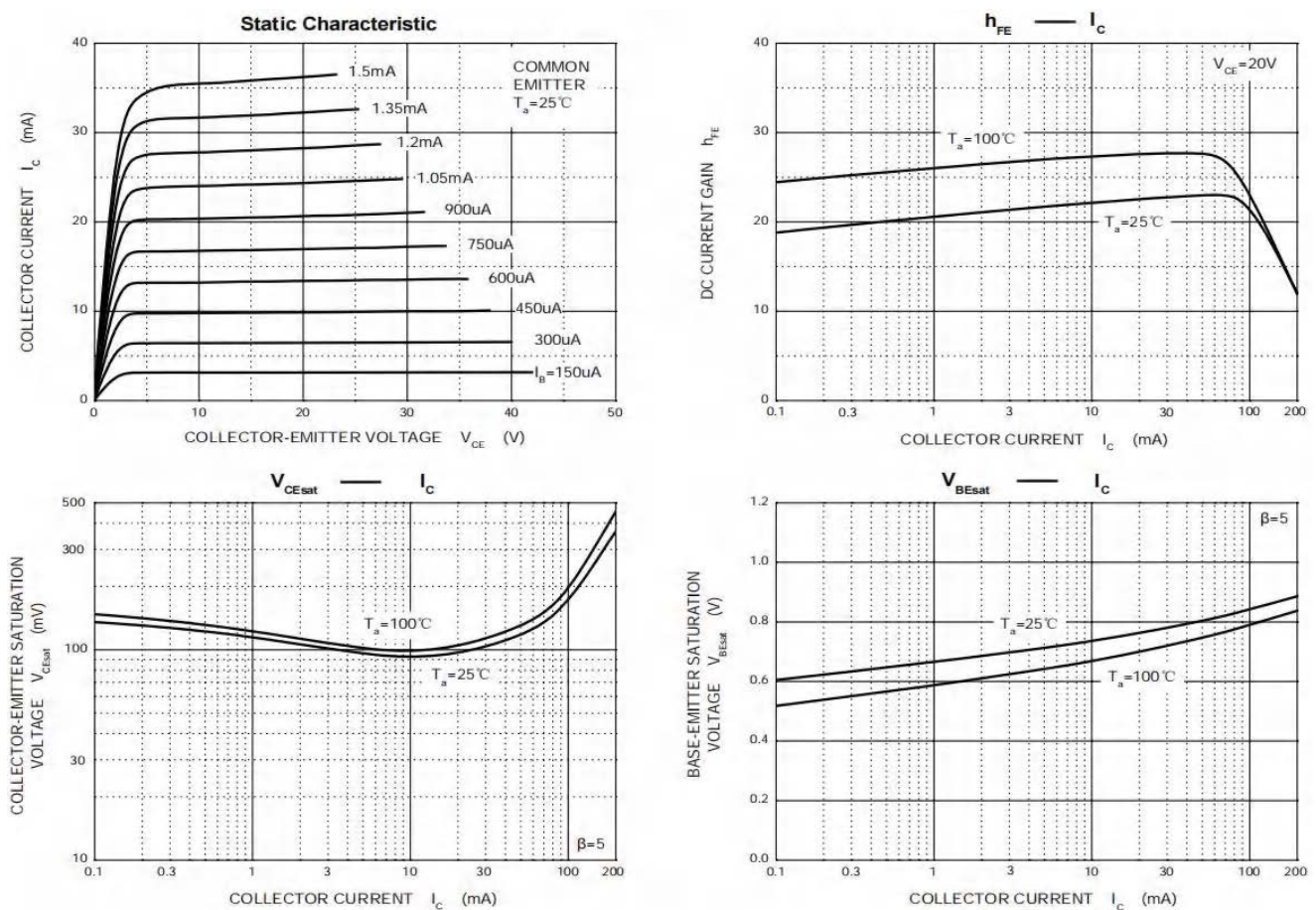
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	420	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	200	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	400	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

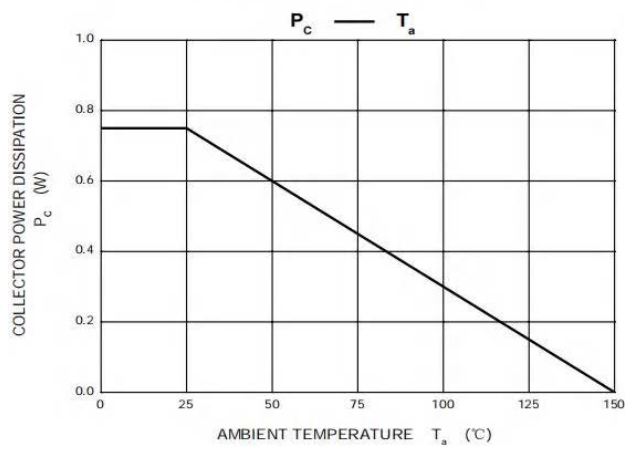
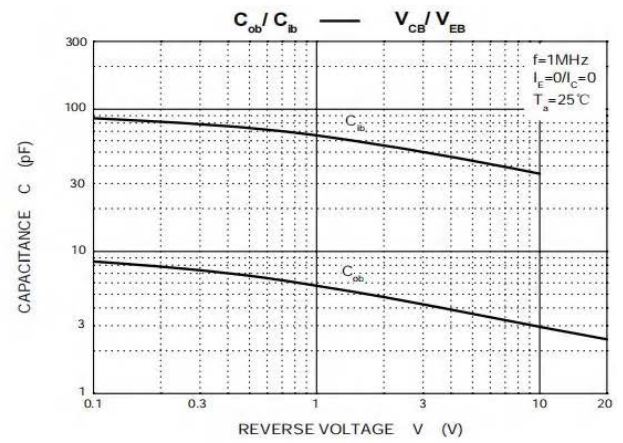
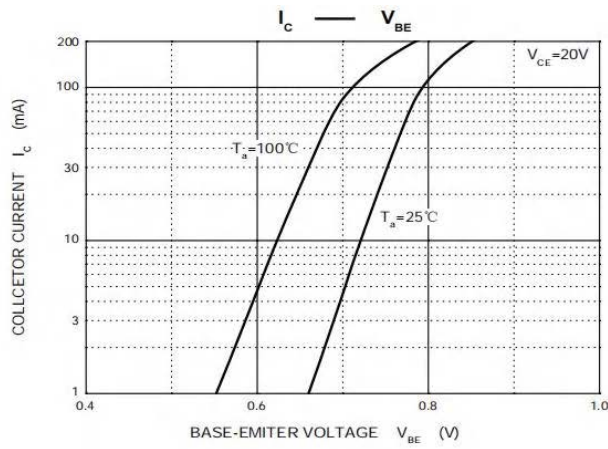


Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	600			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	420			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	7			V
I_{CBO}	Collector cut-off current	$V_{CB}=600V, I_E=0$			100	μA
I_{CEO}	Collector cut-off current	$V_{CE}=400V, I_E=0$			200	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V, I_C=0$			100	μA
$h_{FE(1)}$	DC current gain(1)	$V_{CE}=20V, I_C=20mA$	20		30	
$h_{FE(2)}$	DC current gain(2)	$V_{CE}=10V, I_C=0.25mA$	5			
$V_{CE(sat)1}$	Collector-emitter saturation voltage	$I_C=50mA, I_B=10mA$			0.5	V
$V_{BE(sat)1}$	Base-emitter saturation voltage				1.2	V
f_T	Transition frequency	$V_{CE}=20V, I_C=20mA, f=1MHz$	8			MHz
t_f	Fall time	$I_C=50mA, V_{CC}=45V,$ $I_{B1}=-I_{B2}=5mA,$			0.3	μS
t_s	Storage time				1.5	μS

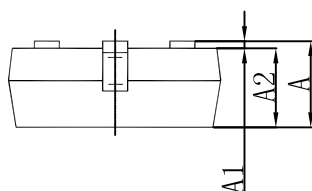
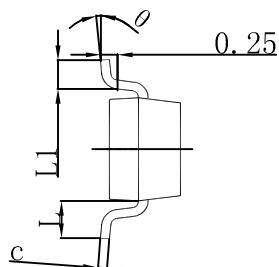
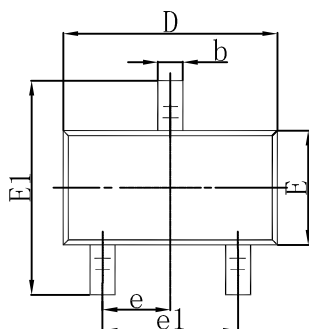
Typical Characteristics





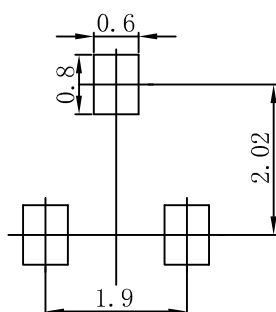


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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