



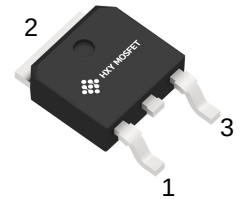
Features

- Power Switching Applications

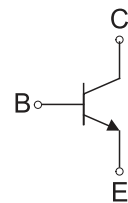
Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
3DD13003	TO-252-2L(DPAK)	13003	2500

- 1.BASE
2.COLLECTOR
3.EMITTER



TO-252-2L
(DPAK)



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

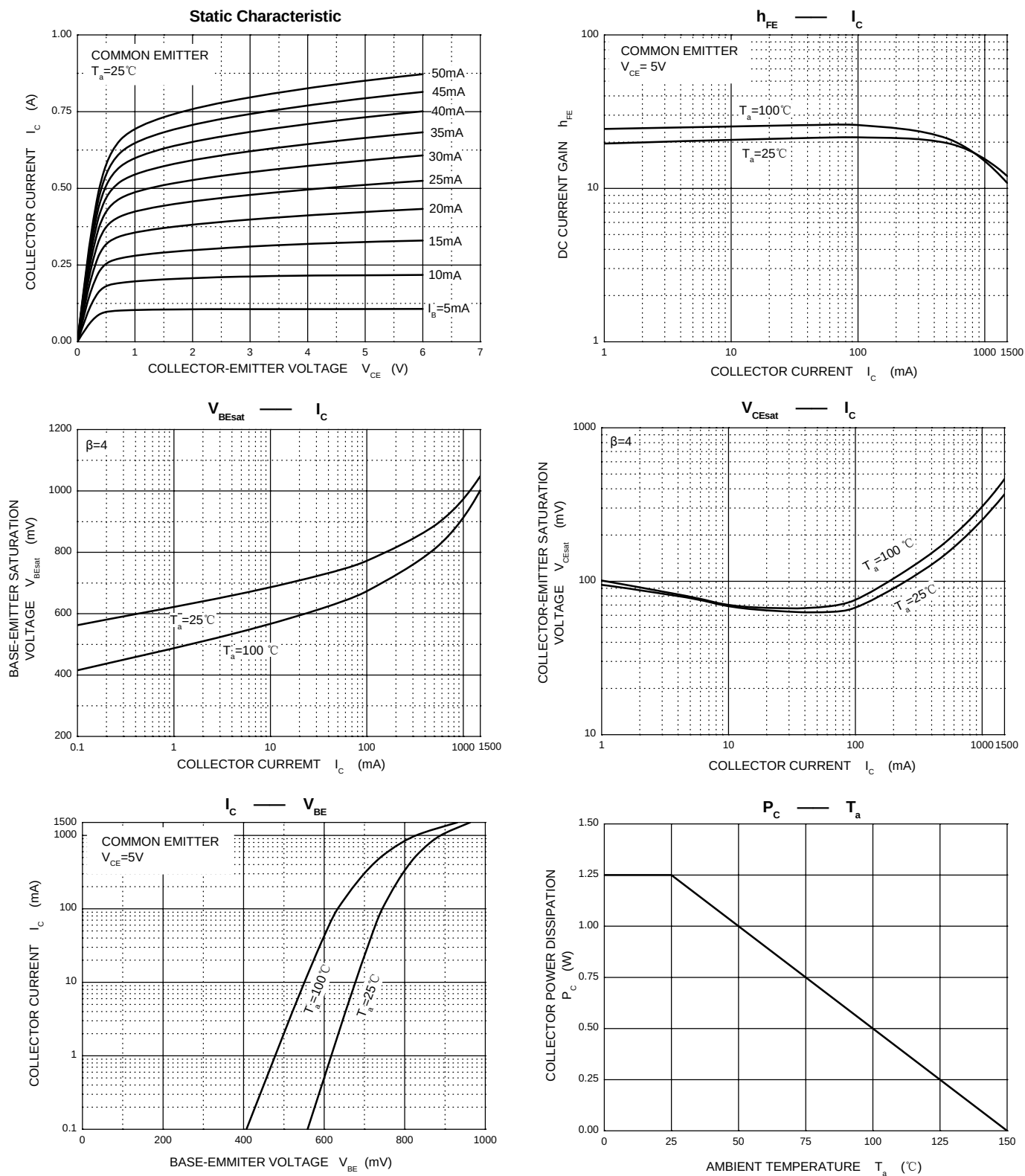
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	480	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current -Continuous	1.5	A
P_C	Collector Dissipation	1.25	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	480			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700V, I_E = 0$			0.5	mA
Collector cut-off current	I_{CEO}	$V_{CE} = 400V, I_B = 0$			0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7V, I_C = 0$			0.5	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 0.5A$	20		40	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 1.5A$	5			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5A, I_B = 200mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 0.5A, I_B = 200mA$			1.2	V
Base-emitter voltage	V_{BE}	$I_E = 2A$			3	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	$I_C = 250mA$	1.5		3.5	μs



Typical Characteristics





3DD13003
NPN Plastic-Encapsulate Transistors

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	0.483 TYP.		0.190 TYP.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 TYP.		0.114 TYP.	
L2	1.400	1.700	0.055	0.067
L3	1.600 TYP.		0.063 TYP.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 TYP.		0.211 TYP.	



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