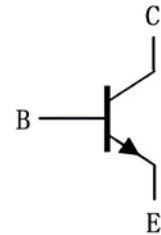


Features

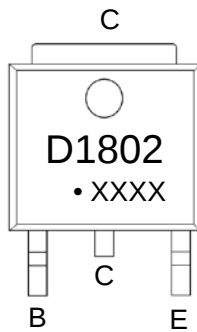
- Adoption of FBET,MBIT Processes
- Large Current Capacity and Wide ASO
- Low Collector-to-Emitter Saturation Voltage
- Fast Switching Speed



TO-252-2L top view



Schematic diagram



Marking and pin assignment



Pb-Free



RoHS



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EB0}	Emitter-Base Voltage	6	V
I_C	Collector Current	3	A
P_C	Collector Power Dissipation	1	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

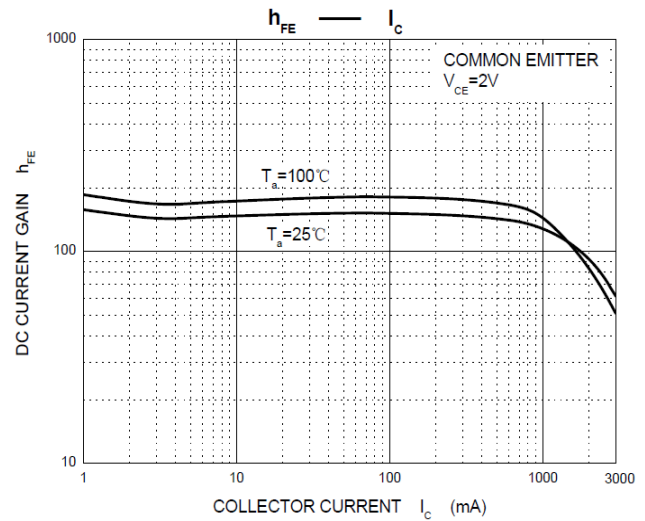
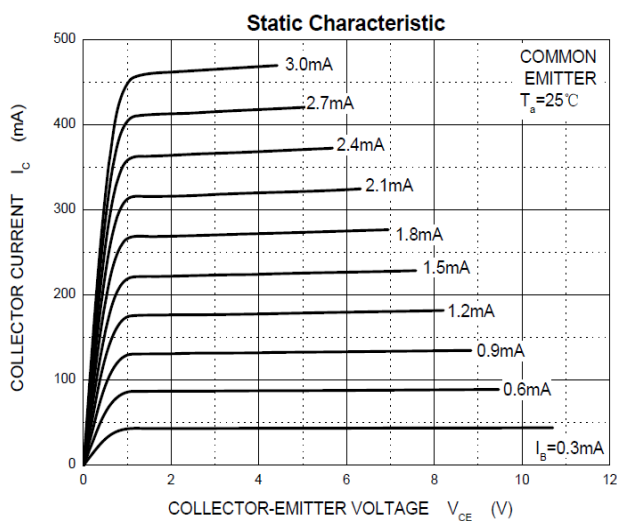
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SD1802	TO-252-2L	D1802	2,500	5,000	35,000	13"reel

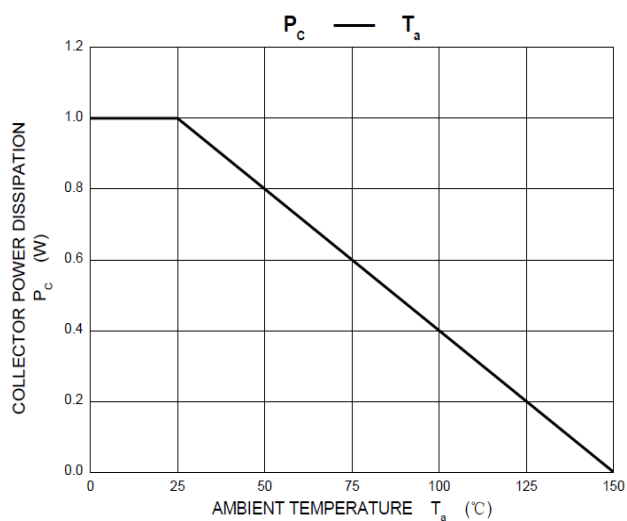
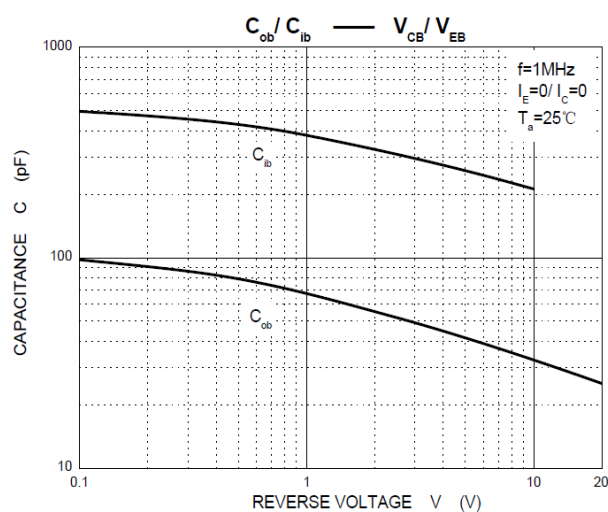
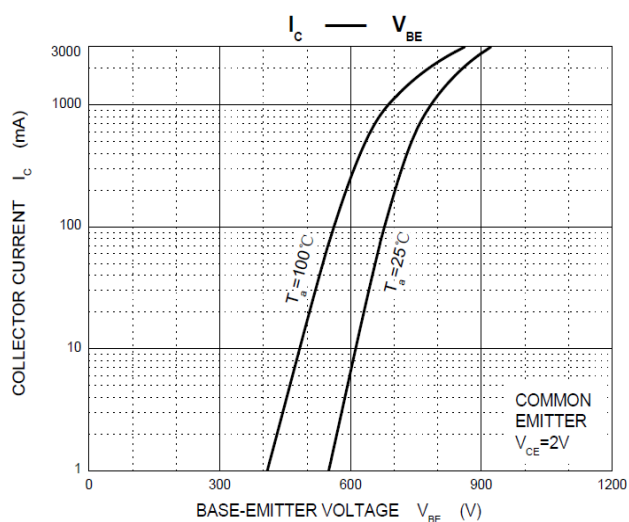
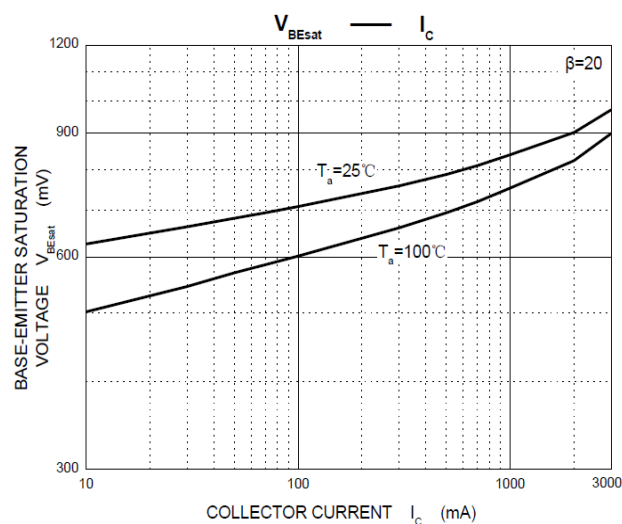
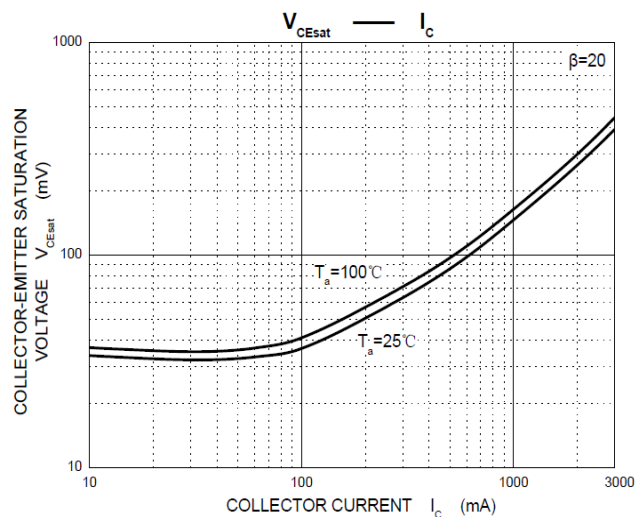
Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu A, I_E=0$	60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	50	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu A, I_C=0$	6	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=40V, I_E=0$	--	--	1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4V, I_C=0$	--	--	1	μA
$H_{FE(1)}$	DC current gain	$V_{CE}=2V, I_C=100mA$	100	--	560	
$H_{FE(2)}$		$V_{CE}=2V, I_C=3A$	35	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=2A, I_B=100mA$	--	--	0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=2A, I_B=100mA$	--	--	1.2	V
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$	--	25	--	pF
f_T	Transition frequency	$V_{CE}=10V, I_C=50mA$	--	150	--	MHz

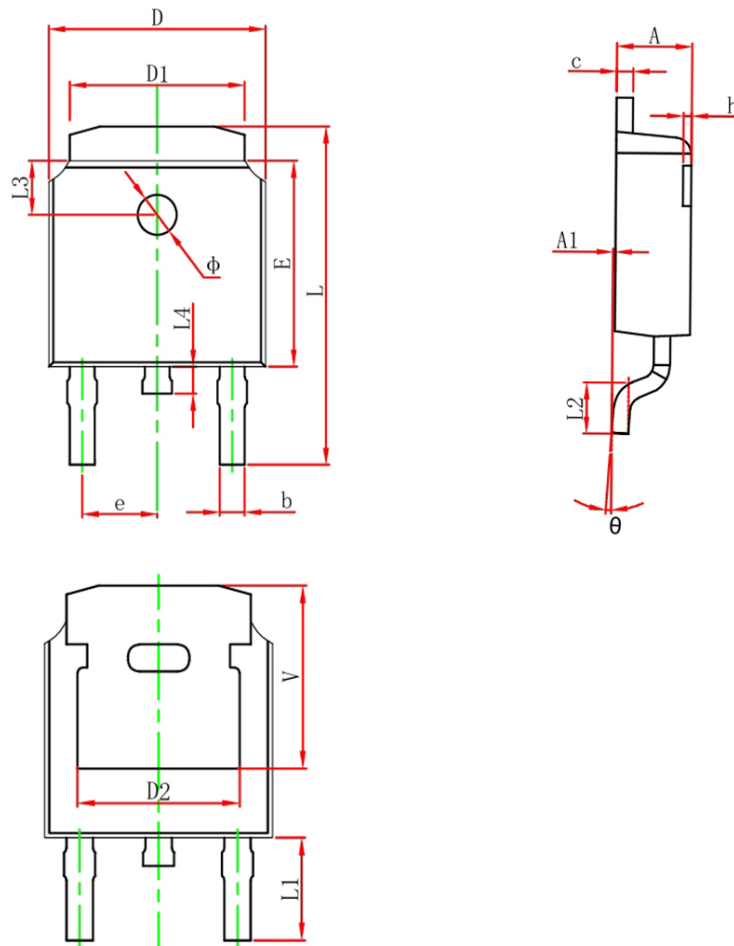
Classification Of h_{FE}

Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560

Typical Characteristics




TO-252-2L Package information



Symbol	Dimensions in Millimeters(mm)		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	0.635	0.770	0.025	0.030
c	0.450	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	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.712	10.312	0.386	0.406
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
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	5.250 REF.		0.207 REF.	