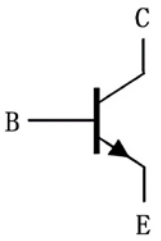
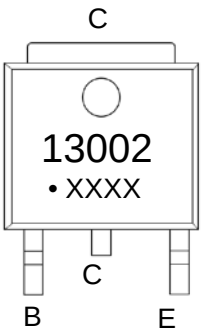
Features

• Power Switching Applications

TO-252-2L top view



Schematic diagram



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings(Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
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	1	A
P_C	Collector Power Dissipation	1.25	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
3DD13002	TO-252-2L	13002	2,500	5,000	35,000	13"reel

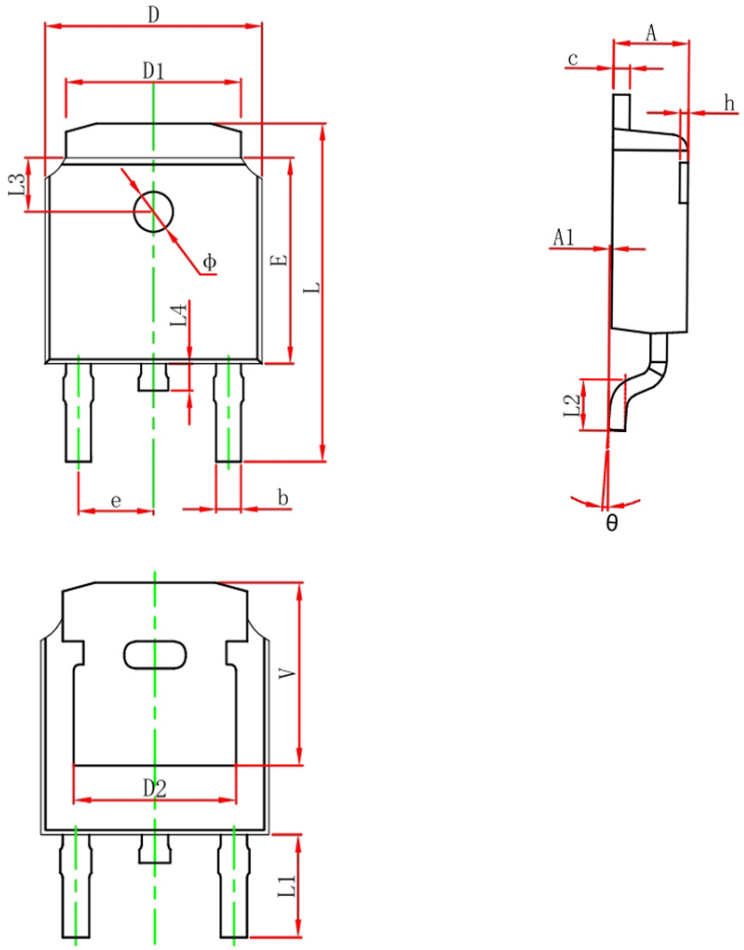
Electrical Characteristics (TJ=25℃ unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C= 100μA， I_E=0	600	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=1mA, I_B=0	400	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E= 100μA， I_C=0	6	--	--	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_B=0	--	--	100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=7V , I_C=0	--	--	100	μA
$H_{FE(1)}$	DC current gain	V_{CE}=10V,I_C=200mA	9	--	40	
$H_{FE(2)}$		V_{CE}=10V,I_C=0.25mA	5	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=200mA,I_B=40mA	--	--	0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=200mA,I_B=40mA	--	--	1.1	V
f_T	Transition frequency	V_{CE}=10V,I_c=100mA,f =1MHz	5	--	--	MHz
t_f	Fall time	I_C=1A, I_{B1}=-I_{B2}=0.2A V_{CC}=100V	--	--	0.5	μs
t_s	Storage time		--	--	2.5	μs

Classification Of hFE(1)

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

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.	