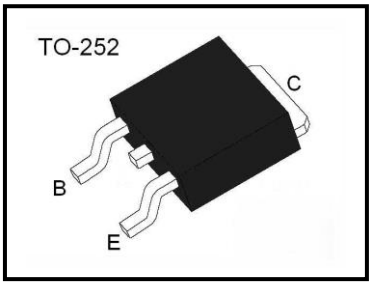
Applications

- Audio power amplifier, and
- DC-DC converter
- Voltage regulator



Features

- High current output up to 3A
- Low saturation voltage
- Complementary to 2SD1758

Absolute Maximum Rating (T_C=25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	-40	V
Collector-emitter voltage		BV_{CEO}	-32	V
Emitter-base voltage		BV_{EBO}	-5	V
Collector current (DC)		I_C	-2	A
Collector current pulse		I_{CP}	-3	A
Collector power dissipation	Ta= 25℃	P_C	1.5	W
	T_C= 25℃		10	
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-65～150	℃

Electrical Characteristics (T_C=25℃ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C = -50μA，I_E = 0	-40			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = -1mA，I_B = 0	-32			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = -50μA，I_C = 0	-5			V
Collector cut-off current	I_{CBO}	V_{CB} = -20V，I_E = 0			-1	μA
Collector cut-off current	I_{CEO}	V_{CE} = -20V，I_B = 0			-1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 7V，I_C = 0			-1	μA
DC current gain*	h_{FE}	V_{CE}= -3V，I_C= -0.5A	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -2A，I_B = -0.2A			-0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = -2A，I_B = -0.2A			-2.0	V
Transition frequency	f_T	V_{CE} = -5V，I_B = -0.5A		100		MHz
Output capacitance	C_{ob}	V_{CB} = -10V,I_E =0, f=1MHz		50		pF

Note * Pulse test: P_W ≤ 300μs, duty cycle ≤ 2%

h_{FE} Classification

Classification	Q	R
Range	120~270	180~390

Typical Characteristics

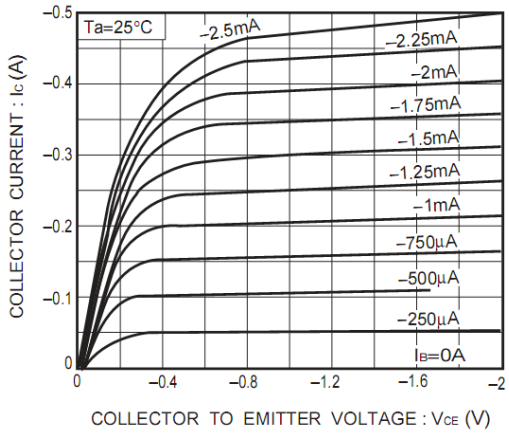


Figure 1. Static Characteristic

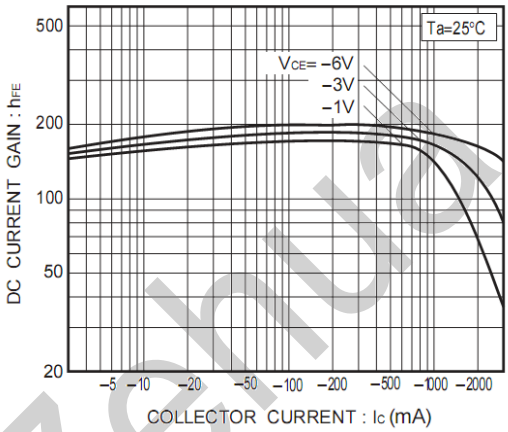


Figure 2. DC current Gain

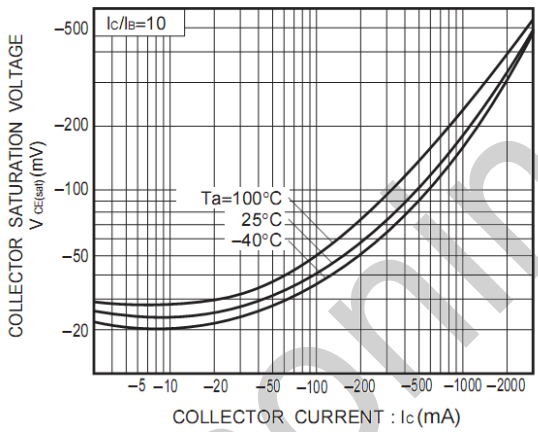


Figure 3. Collector-Emitter Saturation Voltage

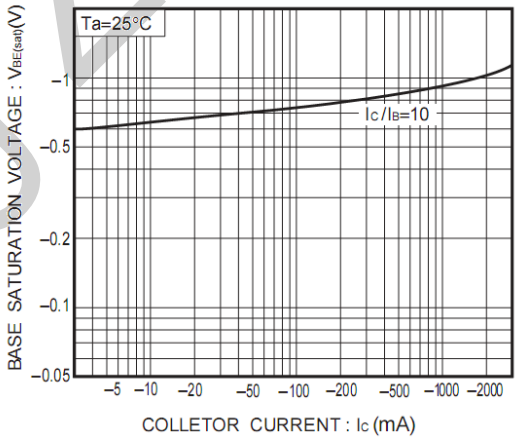


Figure 4. Base-Emitter Saturation Voltage

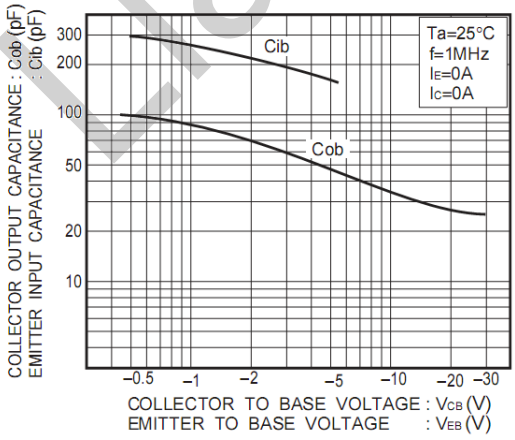


Figure 5. Capacitance Characteristic

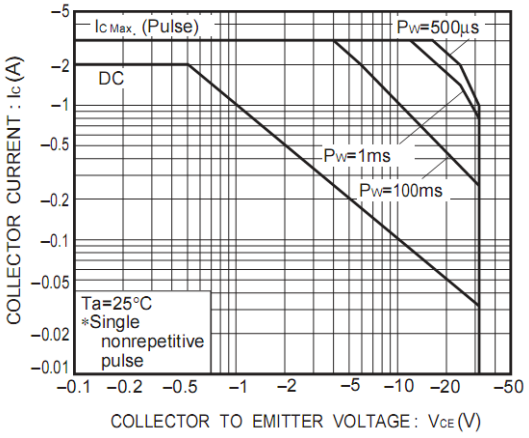
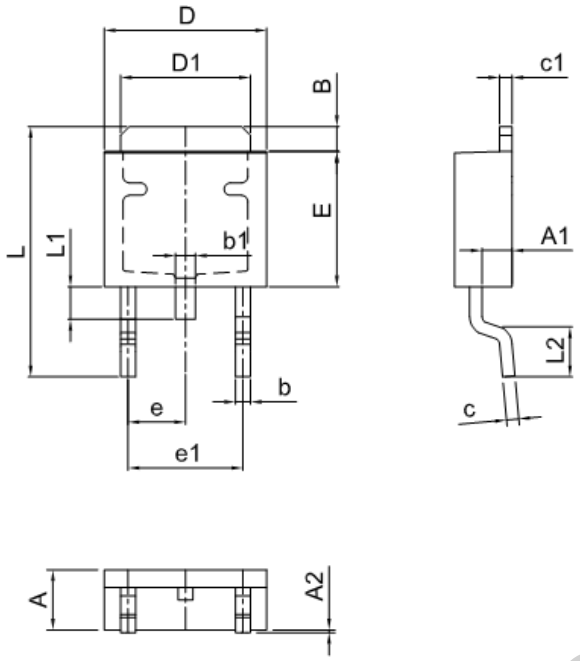


Figure 6. Power Derating

Package Dimensions



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.094
A1	1.00	1.40	0.039	0.055
A2	0.00	0.15	0.000	0.006
B	1.00	1.40	0.039	0.055
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.30	6.70	0.248	0.264
D1	5.10	5.50	0.201	0.217
E	5.30	6.00	0.209	0.236
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.60	10.40	0.378	0.409
L1	0.60	1.00	0.024	0.039
L2	1.40	1.70	0.055	0.063