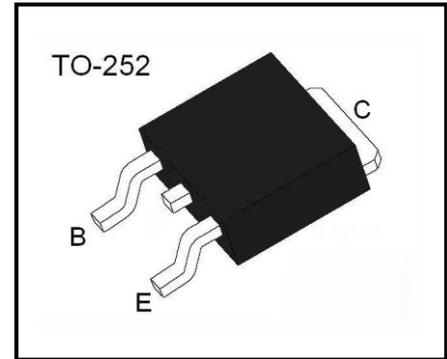


**Applications**

- Audio power amplifier
- DC-DC convertor
- Voltage regulator

**Features**

- Low saturation voltage
- High current output up to 3A
- Complement to 2SB1182

**Absolute Maximum Rating** ( $T_a=25^\circ\text{C}$ )

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
Base current	$I_B$	0.6	A
Collector power dissipation	$P_C$	$T_a=25^\circ\text{C}$	1.5
		$T_C=25^\circ\text{C}$	10
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65~150	$^\circ\text{C}$

**Electrical Characteristics** ( $T_a=25^\circ\text{C}$ )

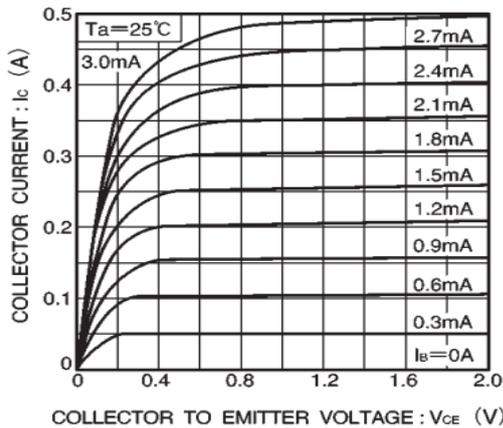
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C = 50\mu\text{A}$ , $I_E = 0$	-40			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = 1\text{mA}$ , $I_B = 0$	-32			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = 50\mu\text{A}$ , $I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 20\text{V}$ , $I_E = 0$			1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -20\text{V}$ , $I_B = 0$			1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4\text{V}$ , $I_C = 0$			1	$\mu\text{A}$
DC current gain*	$h_{FE}$	$V_{CE} = 3\text{V}$ , $I_C = 0.5\text{A}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$ , $I_B = 0.2\text{A}$			-0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2\text{A}$ , $I_B = 0.2\text{A}$			-2.0	V
Transition frequency	$f_T$	$V_{CE} = 5\text{V}$ , $I_B = 50\text{mA}$		100		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		30		pF

Note \*Pulse Test:  $PW \leq 350\mu\text{s}$ , Duty Cycle  $\leq 2\%$

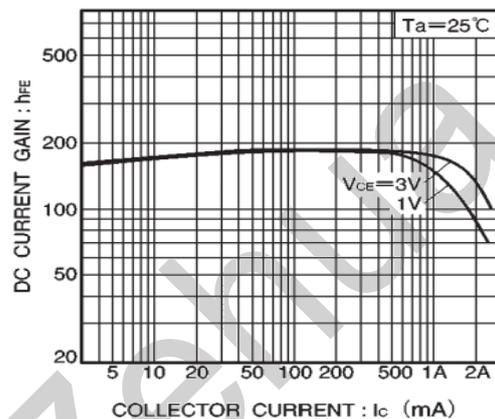
**h<sub>FE</sub> Classification**

Classification	P	Q	R
Range	82~180	120~270	180~390

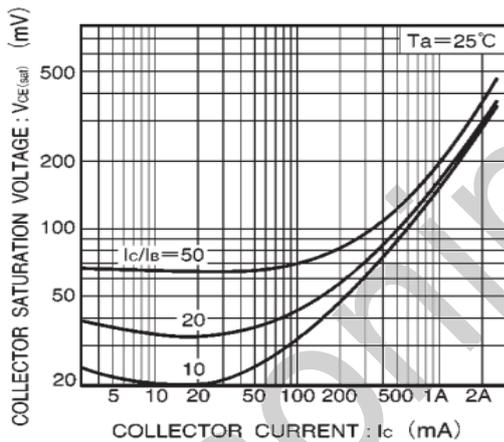
**Typical Characteristics**



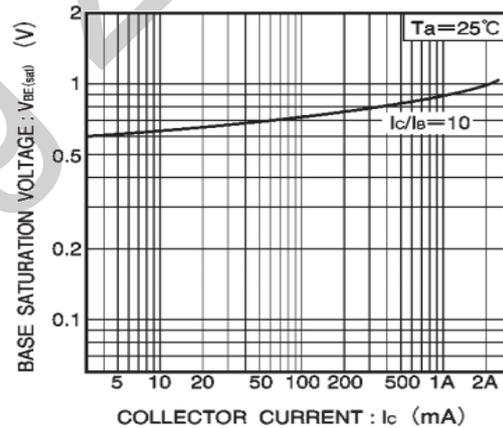
**Figure 1. Static Characteristic**



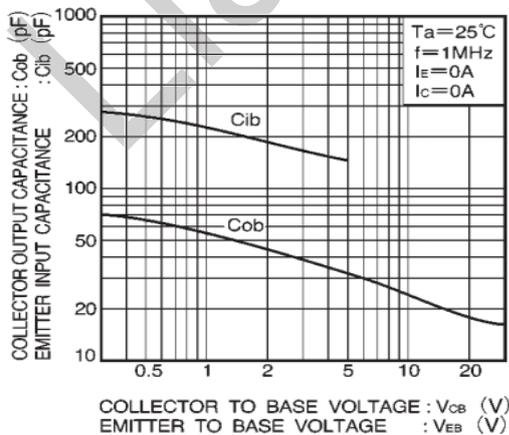
**Figure 2. DC current Gain**



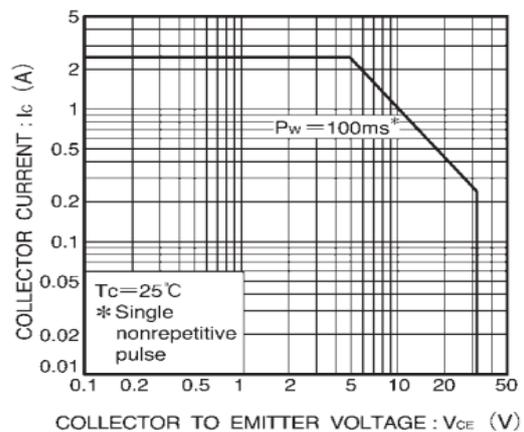
**Figure 3. Collector-Emitter Saturation Voltage**



**Figure 4. Base-Emitter Saturation Voltage**

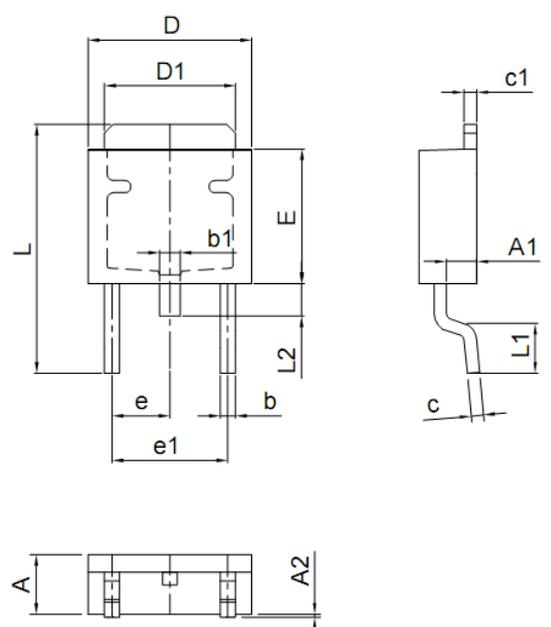


**Figure 5. Capacitance Characteristic**



**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	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	6.20	6.70	0.244	0.264
D1	5.10	5.50	0.201	0.217
E	5.50	6.00	0.217	0.236
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.70	10.40	0.382	0.409
L1	1.40	1.70	0.055	0.063
L2	0.60	1.20	0.024	0.047