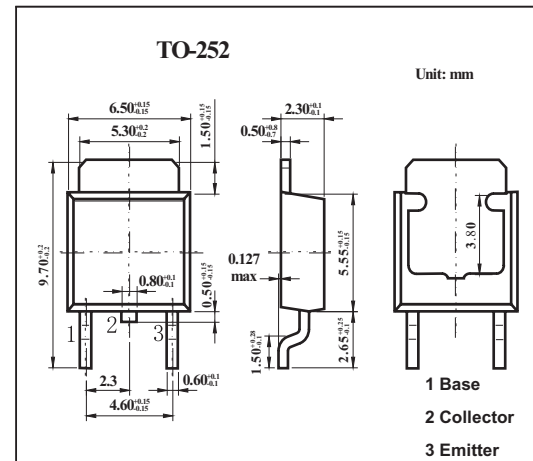


Medium Power Transistor

2SD1758

■ Features

- Low $V_{CE(sat)}$, $V_{CE(sat)} = 0.5V$
($I_C = 2A$, $I_B = 0.2A$).
- Epitaxial planar type
- NPN silicon transistor



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	40	V
Collector-emitter voltage	V_{CEO}	32	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	2	A
Collector current (pulse) *	I_{CP}	2.5	A
Collector power dissipation	P_C	1	W
$T_C = 25^\circ C$		10	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

* $P_w=20ms$.

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base voltage	BV_{CBO}	$I_C=50\mu A$	40			V
Collector-emitter voltage	BV_{CEO}	$I_C=1mA$	32			V
Emitter-base voltage	BV_{EBO}	$I_E=50\mu A$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=20V$			1	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=4V$			1	μA
Forward current transfer ratio	h_{FE}	$V_{CE}=3V, I_C=0.5A$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=0.2A$		0.5	0.8	V
Transition frequency	f_T	$V_{CE}=5V, I_E = -500mA, f=100MHz$		100		MHz
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0A, f=1MHz$		30		pF

■ h_{FE} Classification

Rank	P	Q	R
h_{FE}	82~180	120~270	180~390