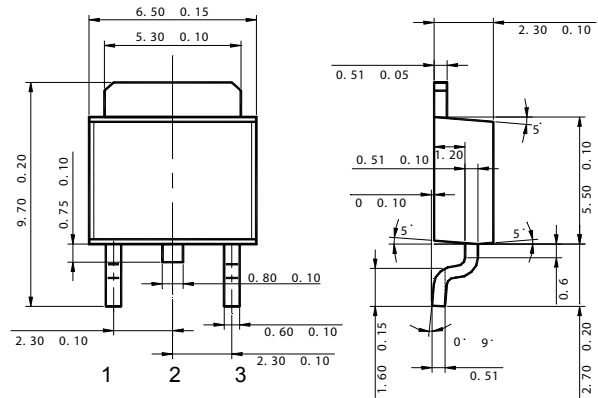


RoHS Compliant Product

TO-252(D-Pack)

FEATURES

- Power Dissipation
 P_{CM} : 10 W ($T_a = 25\text{ }^\circ\text{C}$)
- Collector Current
 I_{CM} : -3 A
- Collector-Base Voltage
 $V_{(BR)CBO}$: -40 V (min)
- Designed for use in output stage of 10W amplifier, voltage regulature, DC-DC converter and relay driver.



1. BASE
2. COLLECTOR
3. EMITTER

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-3	A
Collector Current (Pulse)	I_C	-7	A
Base Current	I_B	-0.6	A
Collector Power Dissipation	P_D	10	W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-40			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-30			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$			-1	μA
DC Current Gain	$*h_{FE1}$	$V_{CE} = -2\text{V}, I_C = -20\text{mA}$	30			
DC Current Gain	$*h_{FE2}$	$V_{CE} = -2\text{V}, I_C = -1\text{A}$	100		500	
Collector-Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-0.3	-0.5	V
Base-Emitter Voltage	$*V_{BE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-1	-2	V
Collector Power Dissipation	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		55		pF
Transition Frequency	f_T	$V_{CE} = -5\text{V}, I_C = -0.1\text{A}, f = 100\text{MHz}$		80		MHz

*Pulse Test: Pulse Width $\leq 380\text{ms}$, Duty Cycle $\leq 2\%$

h_{FE} VALUES ARE CLASSIFIED AS FOLLOWS:

ITEM	Q	P	E
h_{FE}	100 ~ 200	160 ~ 320	250 ~ 320

● ELECTRICAL CHARACTERISTIC CURVES

