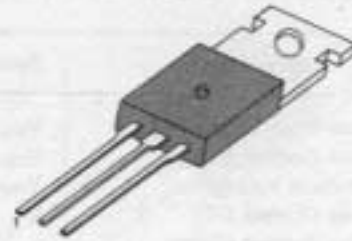


HIGH VOLTAGE AND HIGH RELIABILITY

HIGH SPEED SWITCHING: $t_r = 0.1 \mu\text{s}$ (Typ)
WIDE SOAABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	800	V
Collector-Emitter Voltage	V_{CE0}	500	V
Emitter-Base Voltage	V_{EB0}	7	V
Collector Current (DC)	I_C	5	A
Collector Current (Pulse)	I_C	10	A
Base Current	I_B	2	A
Collector Dissipation	P_C	50	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$

TO-220



1. Base 2. Collector 3. Emitter

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CB0}	$I_C = 1\text{mA}, I_E = 0$	800			V
Collector Emitter Breakdown Voltage	BV_{CE0}	$I_C = 5\text{mA}, R_{th} = \infty$	500			V
Emitter Base Breakdown Voltage	BV_{EB0}	$I_E = 1\text{mA}, I_C = 0$	7			V
Collector Emitter Sustaining Voltage	$V_{CE(sus)}$	$I_C = 2.5\text{A}, I_{B1} = -I_{B2} = 1\text{A}$ $L = 1\text{mH}$, Clamped	500			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 500\text{V}, I_E = 0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
DC Current Gain	h_{FE1} h_{FE2}	$V_{CE} = 5\text{V}, I_C = 0.6\text{A}$ $V_{CE} = 5\text{V}, I_C = 3\text{A}$	15 8		50	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 0.6\text{A}$			1	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3\text{A}, I_B = 0.6\text{A}$			1.5	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_C = 0, f = 1\text{MHz}$		80		pF
Current Gain Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 0.6\text{A}$		18		MHz
Trun On Time	t_{on}	$V_{CC} = 200\text{V}$			0.5	μs
Storage Time	t_s	$5I_{B1} = -2.5I_{B2} = I_C = 4\text{A}$			3	μs
Fall Time	t_f	$R_L = 50\Omega$			0.3	μs

 h_{FE} (1) CLASSIFICATION

Classification	R	O	Y
h_{FE1}	15-30	20-40	30-50

