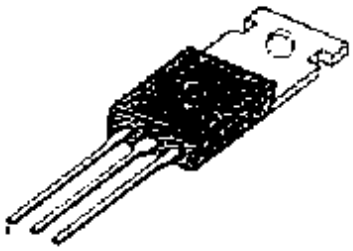
HIGH VOLTAGE AND HIGH RELIABILITY

HIGH SPEED SWITCHING: t_f = 0.1 μS (Typ)
WIDE SOA

TO-220



1 Base 2. Collector 3 Emitter

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	500	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current (DC)	I_C	5	A
Colector Current (Pulse)	I_C	10	A
Base Current	I_B	2	A
Collector Dissipation	P_C	50	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55~150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Base Breakdown Voltage	BV_{CBO}	I_C=1mA, I_E=0	600			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C=5mA, R_{BE}=∞	500			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=1mA, I_C=0	7			V
Collector Emitter Sustaining Voltage	$V_{CE(sus)}$	I_C=2.5A, I_B1=−I_B2=1A L=1mH, Clamped	500			V
Collector Cutoff Current	I_{CBO}	V_{CB}=500V, I_E=0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			10	μA
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=0.6A	15		50	
	$h_{FE}2$	V_{CE}=5V, I_C=3A	8			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=3A, I_B=0.6A			1	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=3A, I_B=0.6A			1.5	V
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		80		pF
Current Gain Bandwidth Product	f_T	V_{CE}=10V, I_C=0.6A		16		MHz
Turn On Time	t_{on}	V_{CC}=200V			0.5	μS
Storage Time	t_s	$5I_B1$=−$2.5I_B2$=I_C=4A			3	μS
Fall Time	t_f	RL=50Ω			0.3	μS

h_{FE} (1) CLASSIFICATION

Classification	R	O	Y
h_{FE} 1	15-30	20-40	30-50