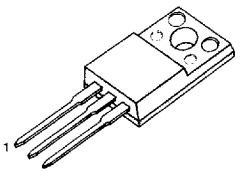
HIGH VOLTAGE SWITCH MODE APPLICATION

HIGH SPEED SWITCHING
Suitable for Switching Regulator and Motor Control

TO-220F



1. Base 2. Collector 3. Emitter

ABSOLUTE MAXIMUN RATING (Ta=25°C)

Characteristics	Symbol	Rating	Unit
Collector-Base Voltage	V_{cbo}	700	V
Collector-Emitter Voltage	V_{ceo}	400	V
Emitter-Base Voltage	V_{ebo}	9	V
Collector Current(DC)	I_c	8	V
Collector Current(Pulse)	I_c	16	A
Base Current(DC)	I_b	4	A
Collector Dissipation	P_c	40	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-65~150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
*Collector Emitter Saturation Voltage	$V_{ceo(sus)}$	I_c=10mA, I_b=0	400			V
Emitter cutoff Current	I_{ebo}	V_{eb}=9V, I_c=0			1	mA
DC Current Gain	hFE1	V_{ce}=5V, I_c=2A	8		60	
	hFE2	V_{ce}=5V, I_c=5A	5		30	
*Collector Emitter Saturation Voltage	$V_{ce(sats)}$	I_c=2A, I_b=0.4A			1	V
		I_c=5A, I_b=1A			2	V
*Base Emitter Saturation Voltage	$V_{be(sats)}$	I_c=8A, I_b=2A			3	V
		I_c=2A, I_b=0.4A			1.2	V
Output Capacitance	C_{ob}	I_c=5A, I_b=1A			1.6	pF
Current Gain Bandwidth Product	fT	V_{cb}=10V, f=0.1MHz		110		MHz
Turn On Time	t_{on}	V_{ce}=10V, I_c=0.5A	4		1.6	uS
Storage Time	t_s	V_{cc}=125V, I_c=5A			3	uS
Fall Time	t_f	I_{b1}=I_{b2}=1A			0.7	uS

*Plus test: PW=300us, DUTY Cycle=2% Pulsed

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