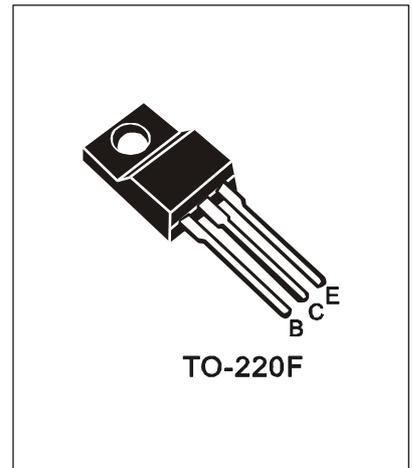


MJE13005

NPN EPITAXIAL PLANAR TRANSISTOR

Description

- Switch Regulators
- PWM Inverters and Motor Controls
- Solenoid and Relay Drivers
- Deflection Circuits



Absolute Maximum Ratings (Ta=25°C)

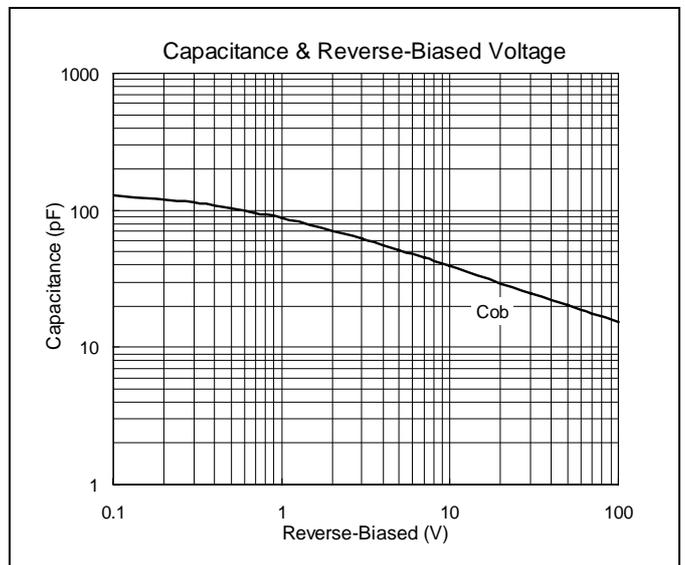
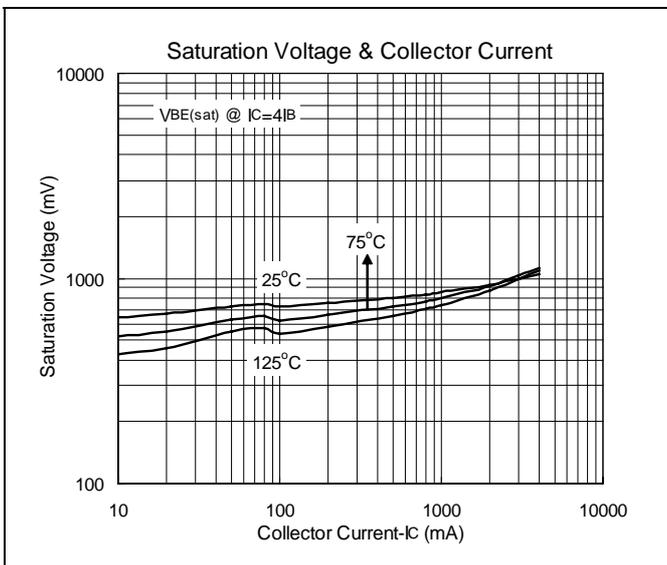
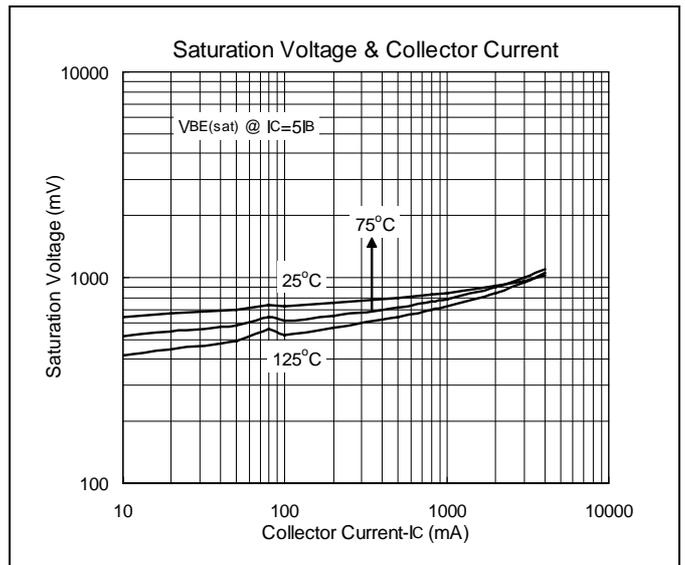
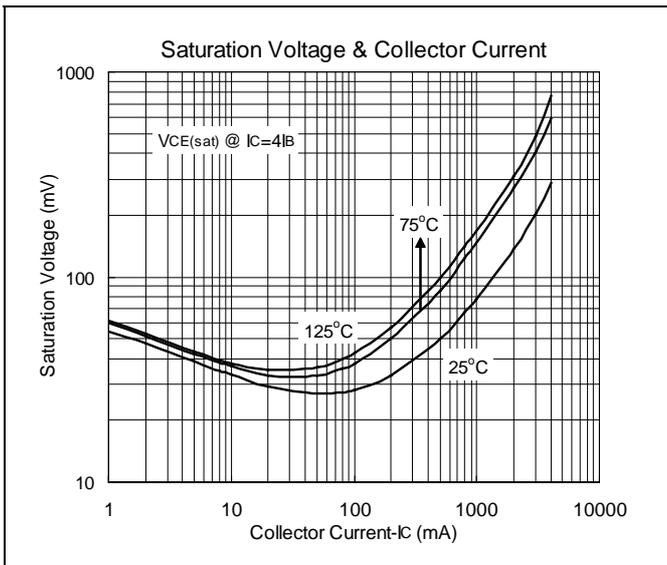
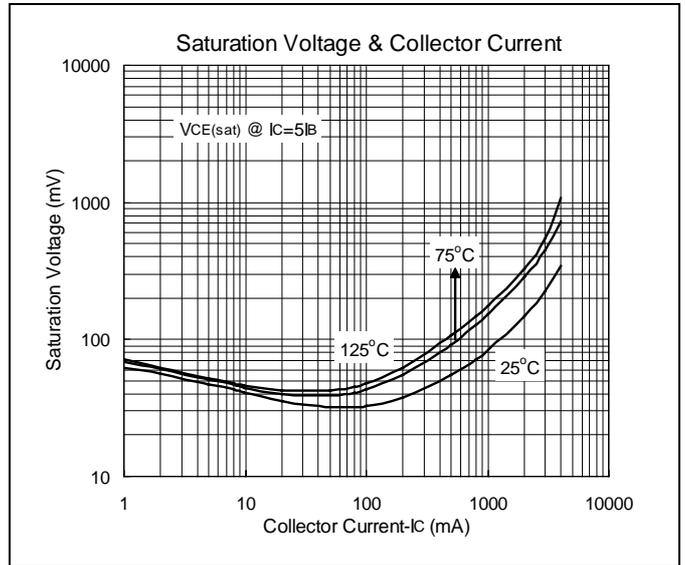
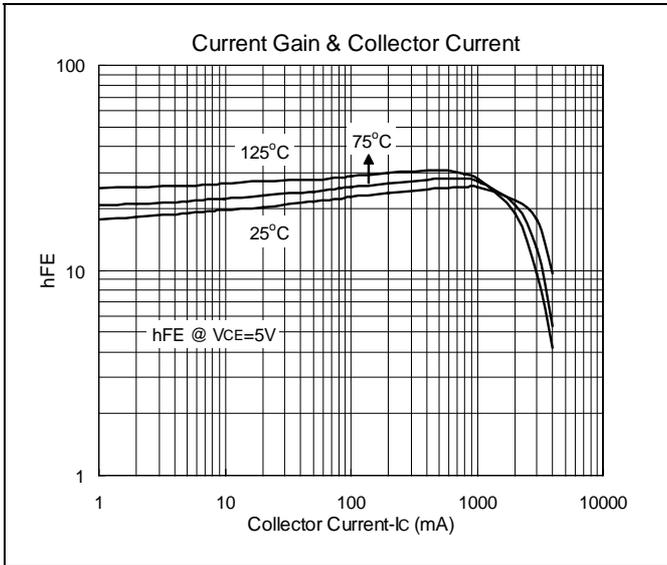
- Maximum Temperatures
 - Storage Temperature -50 ~ +150 °C
 - Junction Temperature 150 °C Maximum
- Maximum Power Dissipation
 - Total Power Dissipation (Tc=25°C) 75 W
- Maximum Voltages and Currents (Ta=25°C)
 - VCEX Collector to Emitter Voltage 700 V
 - VCEO Collector to Emitter Voltage 400 V
 - VEBO Emitter to Base Voltage 9 V
 - IC Collector Current (Continuous) 4 A
 - IB Base Current (Continuous) 2 A

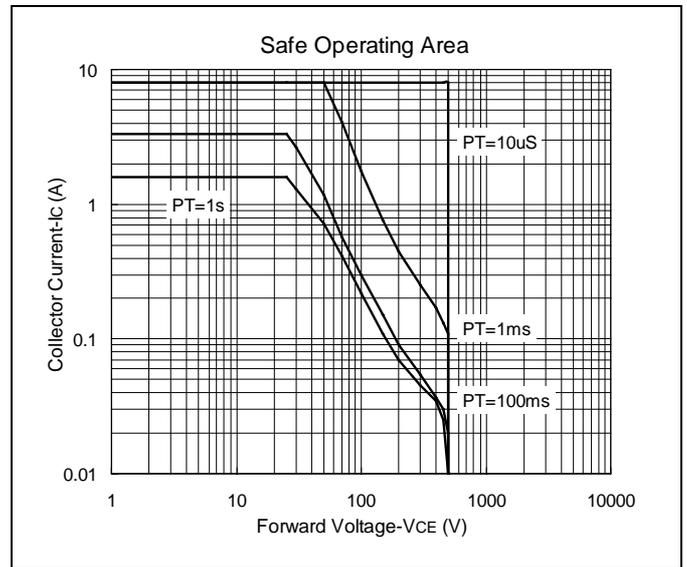
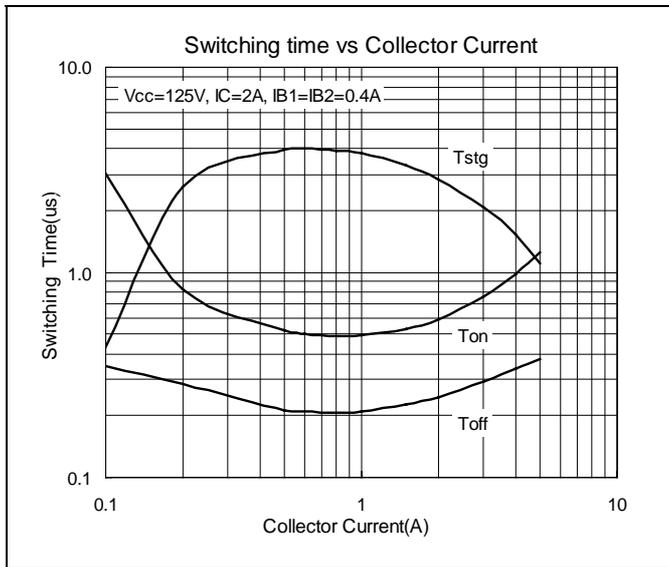
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCEX	700	-	-	V	IC=1mA, VBE(off)=1.5V
BVCEO	400	-	-	V	IC=10mA
IEBO	-	-	1	mA	VEB=9V
ICEX	-	-	1	mA	VCE=700V, VBE(off)=1.5V
*VCE(sat)1	-	-	500	mV	IC=1A, IB=200mA
*VCE(sat)2	-	-	0.6	V	IC=2A, IB=500mA
*VCE(sat)3	-	-	1	V	IC=4A, IB=1A
*VBE(sat)	-	-	1.2	V	IC=1A, IB=200mA
*VBE(sat)	-	-	1.6	V	IC=2A, IB=500mA
*hFE1	10	-	60		IC=0.5A, VCE=5V
*hFE2	10	-	60		IC=1A, VCE=5V
*hFE3	8	-	40		IC=2A, VCE=5V
Ton	-	0.6	0.8	uS	VCC=125V, IC=2A, IB1=IB2=0.4A
ts	-	2.9	4	uS	VCC=125V, IC=2A, IB1=IB2=0.4A
tf	-	0.25	0.9	uS	VCC=125V, IC=2A, IB1=IB2=0.4A

*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

Characteristics Curve





TO-220F MECHANICAL DATA

UNIT: mm

SYMBOL	min	nom	max	SYMBOL	min	nom	max
A	4.20		4.75	e		2.54	
A ₁	2.30		2.90	L	12.50		14.30
b	0.45		0.90	L ₁	9.10		10.05
b ₁	1.10		1.70	L ₂	15.00		16.00
c	0.35		0.90	L ₃	3.00		4.00
D	14.50		17.00	øp	3.00		3.50
D1	6.10		9.00	Q	2.30		2.80
E	9.60		10.30				

