

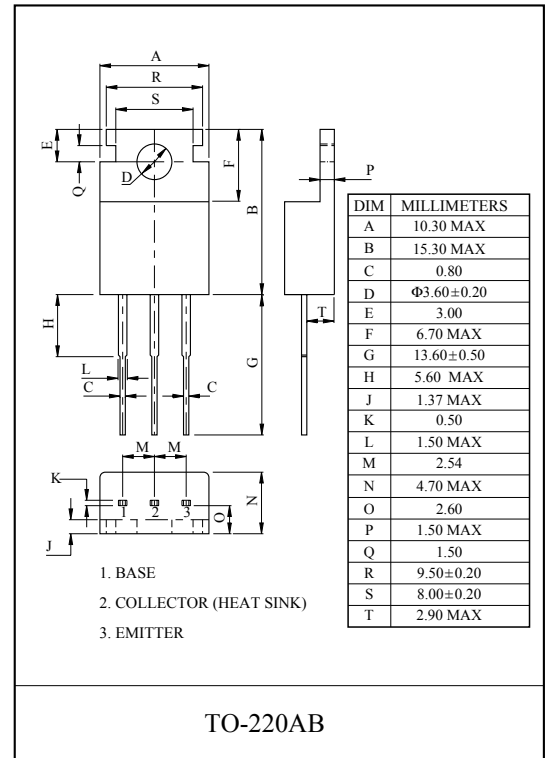
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.
HIGH SPEED DC-DC CONVERTER APPLICATION.

FEATURES

- Excellent Switching Times
: $t_{on}=1.6\mu S(\text{Max.})$, $t_f=0.7\mu S(\text{Max.})$, at $I_C=5A$
- High Collector Voltage : $V_{CBO}=700V$.

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		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	A
	Pulse	I_{CP}	16	
Base Current		I_B	4	A
Collector Power Dissipation (Tc=25°C)		P_C	80	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

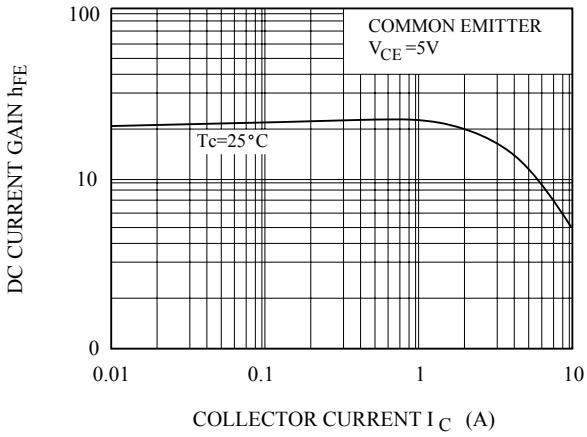


ELECTRICAL CHARACTERISTICS (Ta=25°C)

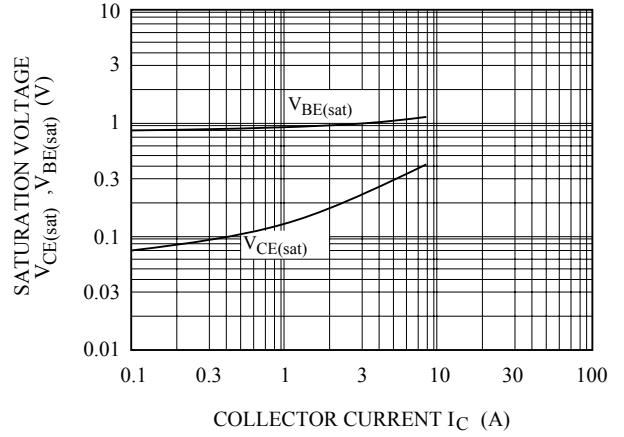
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Emitter Cut-off Current	I_{EBO}	$V_{EB}=9V$, $I_C=0$	-	-	1	mA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5V$, $I_C=2A$	19	-	36	
	$h_{FE}(2)$	$V_{CE}=5V$, $I_C=5A$	10	-	30	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A$, $I_B=0.4A$	-	-	1	V
		$I_C=5A$, $I_B=1A$	-	-	2	
		$I_C=8A$, $I_B=2A$	-	-	3	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2A$, $I_B=0.4A$	-	-	1.5	V
		$I_C=5A$, $I_B=1A$	-	-	1.6	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $f=0.1MHz$, $I_E=0$	-	110	-	pF
Transition Frequency	f_T	$V_{CE}=10V$, $I_C=0.5A$	4	-	-	MHz
Turn-On Time	t_{on}	<p>$I_{B1}=I_{B2}=1A$ DUTY CYCLE $\leq 2\%$</p>	-	-	1.6	μS
Storage Time	t_{stg}		-	-	3	μS
Fall Time	t_f		-	-	0.7	μS

MJE13007

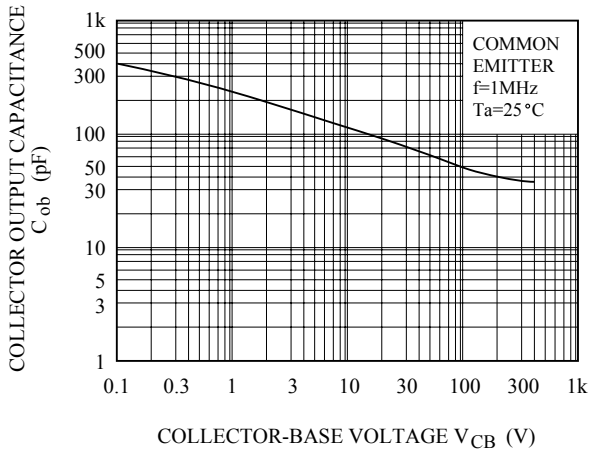
$h_{FE} - I_C$



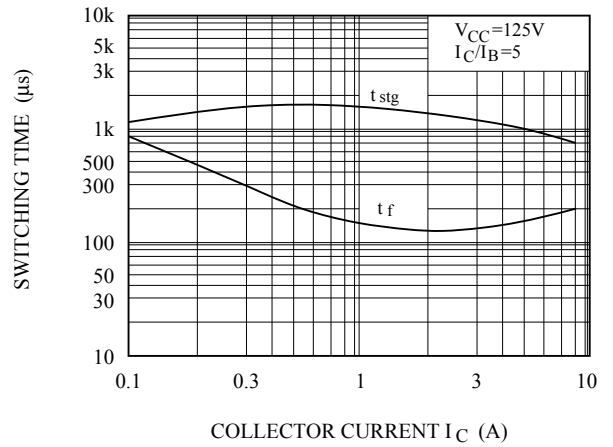
$V_{CE(sat)}, V_{BE(sat)} - I_C$



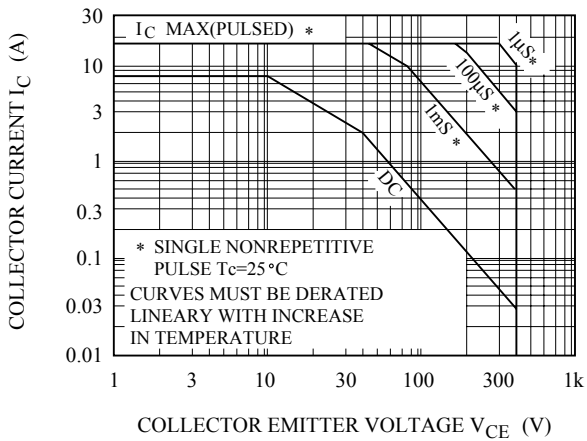
$C_{ob} - V_{CB}$



SWITCHING CHARACTERISTIC



SAFE OPERATING AREA



$P_C - T_a$

