

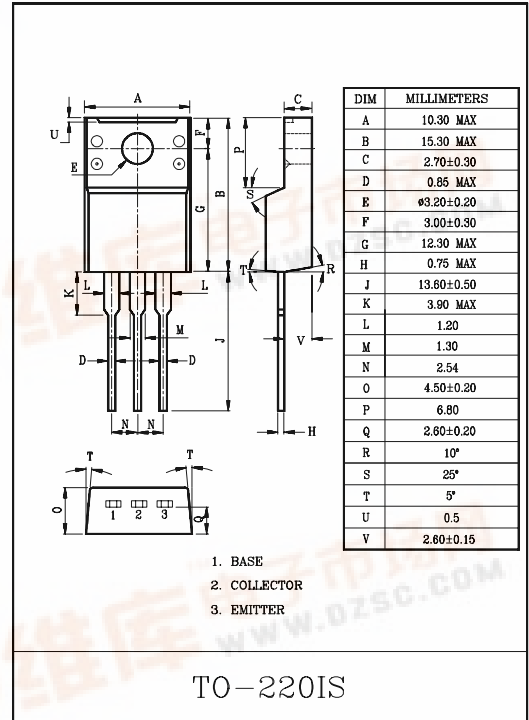
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.
HIGH SPEED DC-DC CONVERTER APPLICATION.
FLUORESCENT LIGHT BALLASTOR APPLICATION.

FEATURES

- Excellent Switching Times
: $t_{on}=0.8\mu S(\text{Max.})$, $t_f=0.9\mu S(\text{Max.})$, at $I_C=2A$
- High Collector Voltage : $V_{CBO}=700V$.

MAXIMUM RATINGS (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	I_C	DC	4
		Pulse	8
Base Current	I_B	2	A
Collector Power Dissipation (Tc=25°C)	P_C	30	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C



ELECTRICAL CHARACTERISTICS (Ta=25°C)

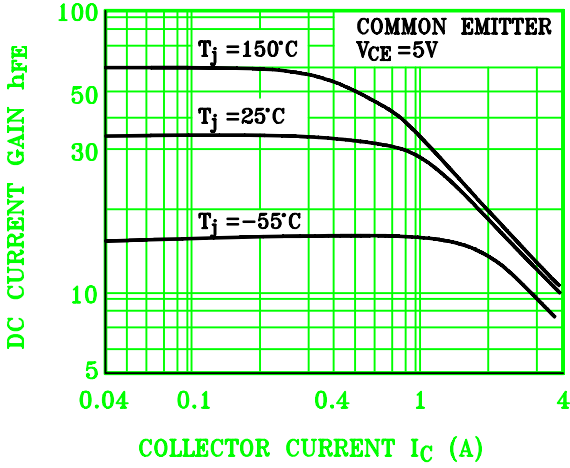
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Emitter Cut-off Current	I_{EBO}	$V_{EB}=9V, I_C=0$	-	-	1	mA
DC Current Gain	$h_{FE(1)}$ Note	$V_{CE}=5V, I_C=1A$	19	-	36	
	$h_{FE(2)}$ Note	$V_{CE}=5V, I_C=2A$	10	-	30	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.2A$	-	-	0.5	V
		$I_C=2A, I_B=0.5A$	-	-	0.6	
		$I_C=4A, I_B=1A$	-	-	1	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.2A$	-	-	1.2	V
		$I_C=2A, I_B=0.5A$	-	-	1.6	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, f=0.1MHz$	-	65	-	pF
Transition Frequency	f_T	$V_{CE}=10V, I_C=0.5A$	4	-	-	MHz
Turn-On Time	t_{on}		-	-	0.8	µS
Storage Time	t_{stg}		-	-	4	µS
Fall Time	t_f		-	-	0.9	µS

Note : $h_{FE(1)}$ Classification O:19~28 , Y:26~36

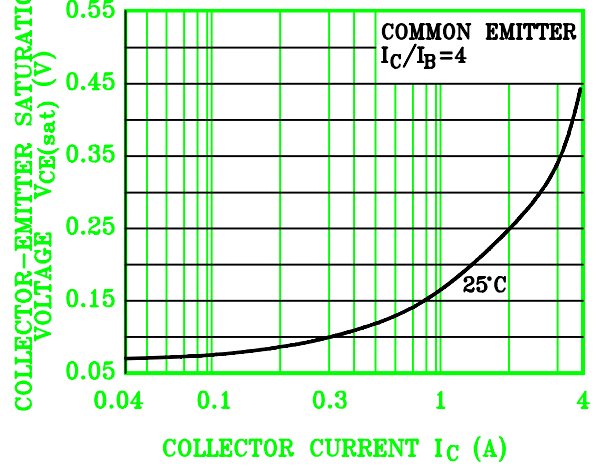


MJE13005F

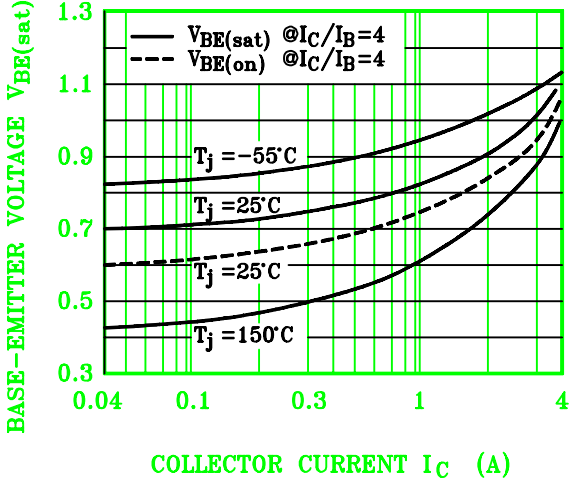
$h_{FE} - I_C$



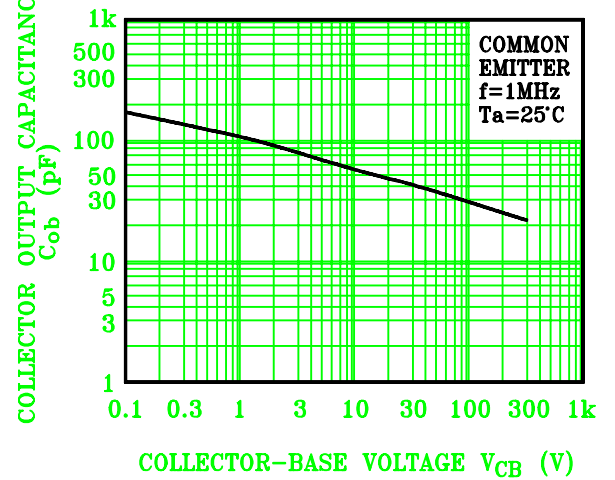
$V_{CE(sat)} - I_C$



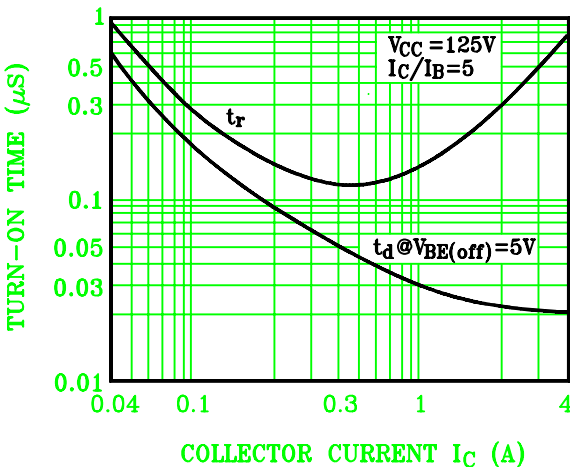
$V_{BE(sat)} - I_C$



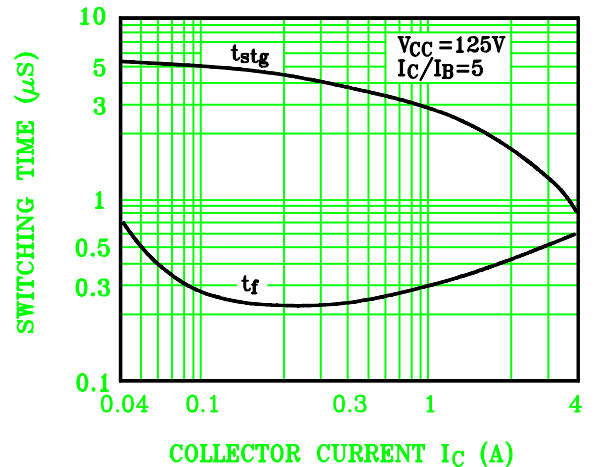
$C_{ob} - V_{CB}$



SWITCHING CHARACTERISTIC

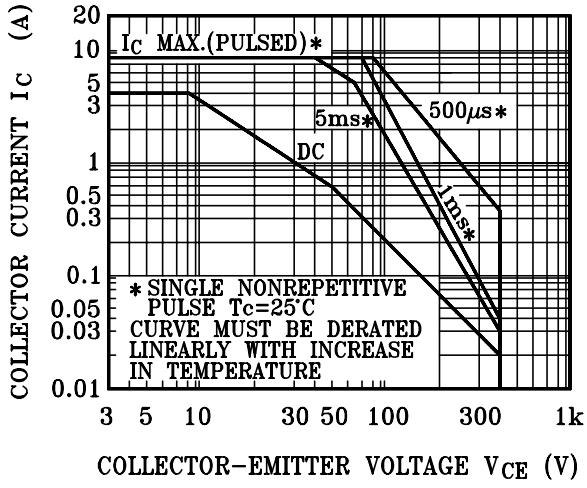


SWITCHING CHARACTERISTIC



MJE13005F

SAFE OPERATING AREA



$P_C - T_a$

