

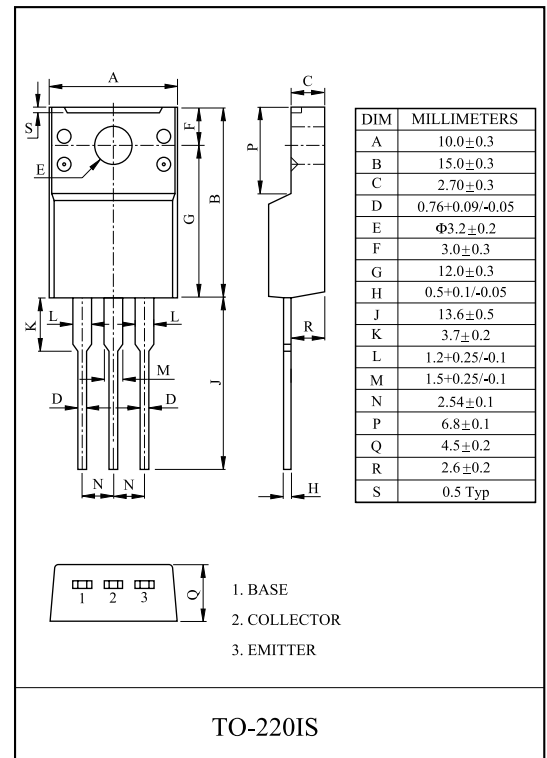
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.
HIGH SPEED DC-DC CONVERTER APPLICATION.

FEATURES

- Excellent Switching Times
: $t_{on}=1.1\mu S(\text{Max.})$, $t_f=0.7\mu S(\text{Max.})$, at $I_C=8A$
- 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	12	A
	Pulse	I_{CP}	24	
Base Current		I_B	6	A
Collector Power Dissipation (Tc=25 °C)		P_C	50	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)	$V_{CE}=5V$, $I_C=5A$	14	-	28	
	$h_{FE}(2)$	$V_{CE}=5V$, $I_C=8A$	6	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A$, $I_B=1A$	-	-	1	V
		$I_C=8A$, $I_B=1.6A$	-	-	1.5	
		$I_C=12A$, $I_B=3A$	-	-	3	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A$, $I_B=1A$	-	-	1.5	V
		$I_C=8A$, $I_B=1.6A$	-	-	1.6	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $f=0.1MHz$, $I_E=0$	-	180	-	pF
Transition Frequency	f_T	$V_{CE}=10V$, $I_C=0.5A$	4	-	-	MHz
Turn-On Time	t_{on}	<p>$I_{B1}=I_{B2}=1.6A$ DUTY CYCLE ≤ 2%</p>	-	-	1.1	µs
Storage Time	t_{stg}		-	-	3	µs
Fall Time	t_f		-	-	0.7	µs

Note : h_{FE} Classification O:14~28

Fig.1 DC current Gain

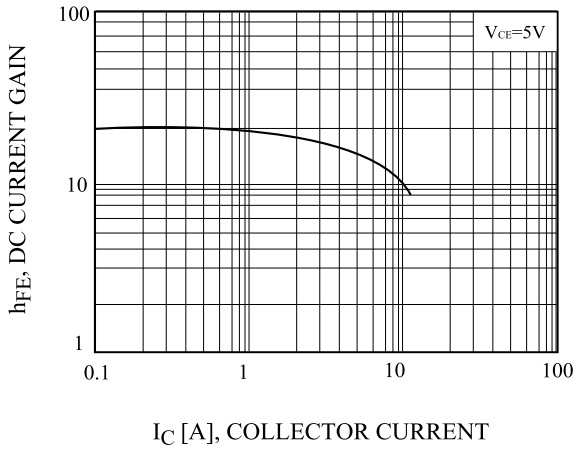


Fig.2 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

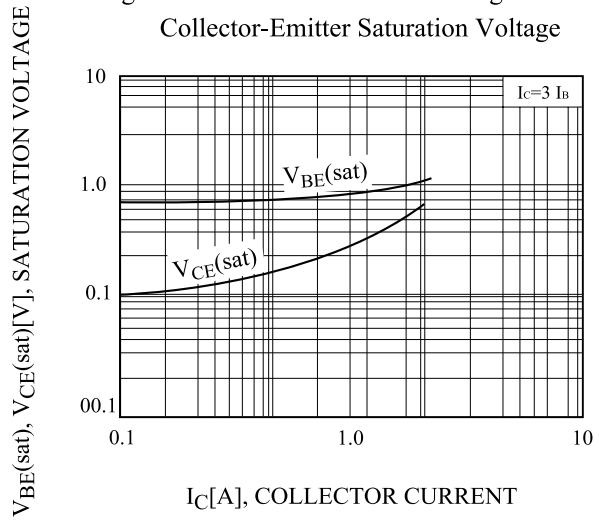


Fig.3. Collector Output Capacitance

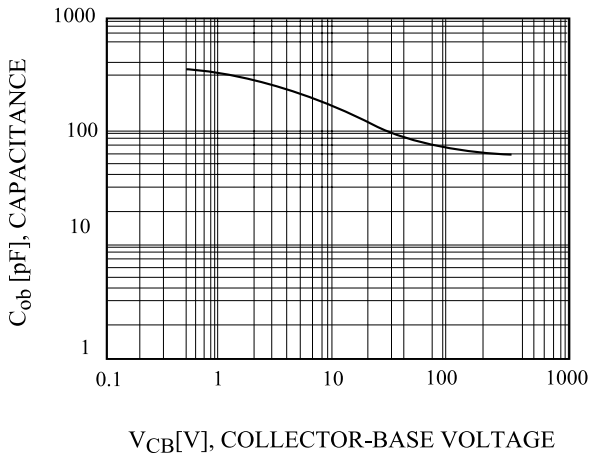


Fig.4 Turn Off Time

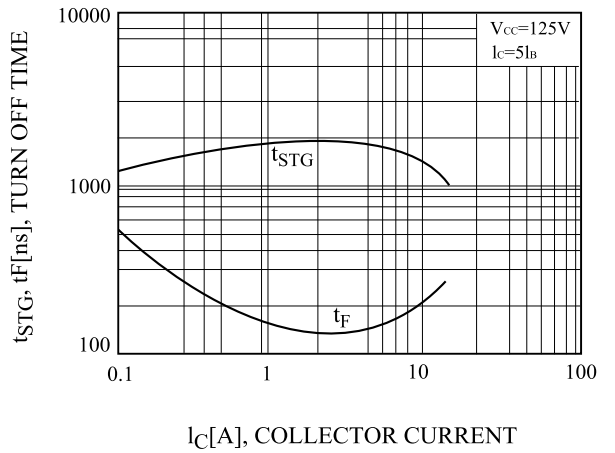


Fig.5 Forward Bias Safe Operating Area

