

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.

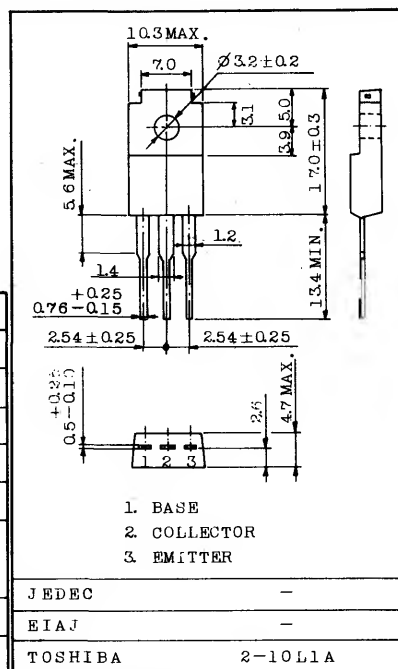
HIGH SPEED DC-DC CONVERTER APPLICATION.

FEATURES:

- Excellent Switching Times
 $t_r = 1.0 \mu s$ (Max.), $t_f = 1.0 \mu s$ (Max.) at $I_C = 0.8 A$
- High Collector Breakdown Voltage : $V_{CE0} = 400V$

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CB0}	500	V
Collector-Emitter Voltage		V_{CE0}	400	V
Emitter-Base Voltage		V_{EB0}	7	V
Collector Current		I_C	2	A
Base Current		I_B	0.5	A
Collector Power Dissipation	$T_a = 25^\circ C$	P_C	2.0	W
	$T_c = 25^\circ C$		20	
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ C$

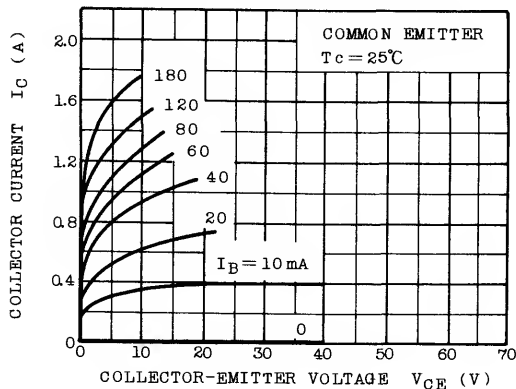


Weight : 2.1g

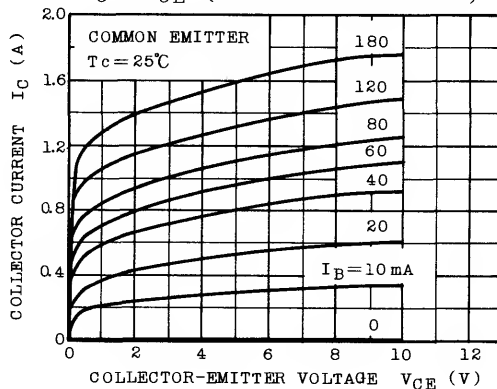
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB} = 400V, I_E = 0$	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB} = 7V, I_C = 0$	-	-	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	500	-	-	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	400	-	-	V
DC Current Gain		h_{FE}	$V_{CE} = 5V, I_C = 0.1A$	20	-	-	
			$V_{CE} = 5V, I_C = 1A$	8	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 1A, I_B = 0.2A$	-	-	1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 1A, I_B = 0.2A$	-	-	1.5	V
Switching Time	Rise Time	t_r	$I_{B1} = -I_{B2} = 0.08A$ DUTY CYCLE < 1%	-	-	1.0	μs
	Storage Time	t_{stg}		-	-	2.5	
	Fall Time	t_f		-	-	1.0	

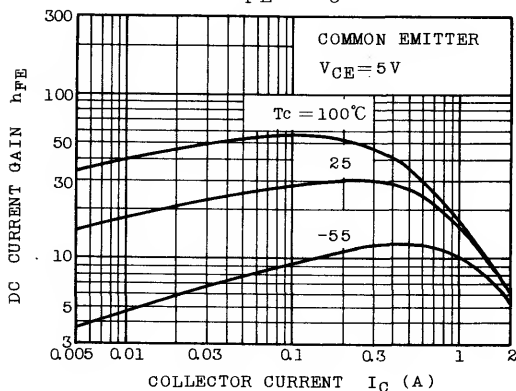
STATIC CHARACTERISTICS



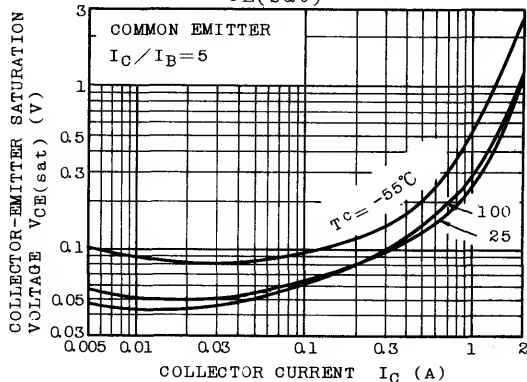
$I_C - V_{CE}$ (LOW VOLTAGE REGION)



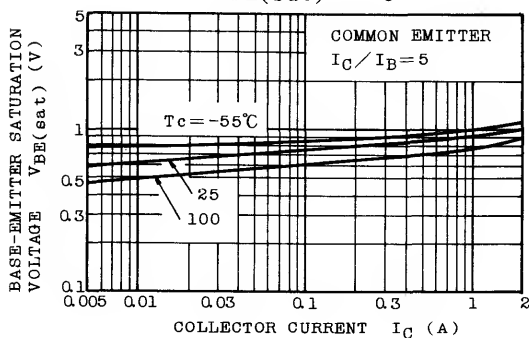
$h_{FE} - I_C$



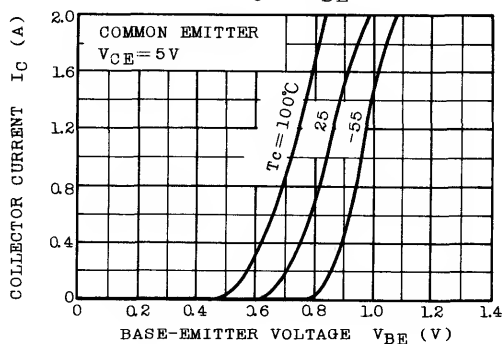
$V_{CE(sat)} - I_C$



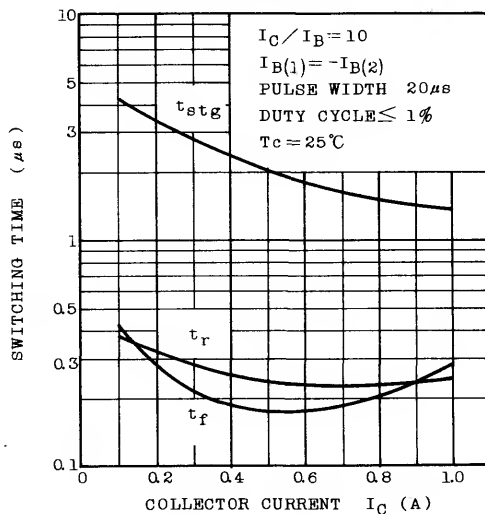
$V_{BE(sat)} - I_C$



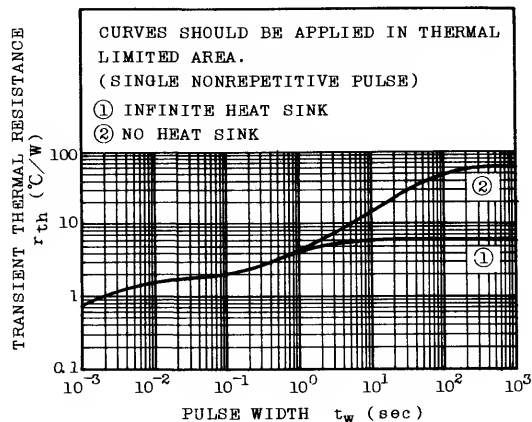
$I_C - V_{BE}$



SWITCHING CHARACTERISTICS



$r_{th} - t_w$



SAFE OPERATING AREA

