

INDUSTRIAL APPLICATIONS

Unit in mm

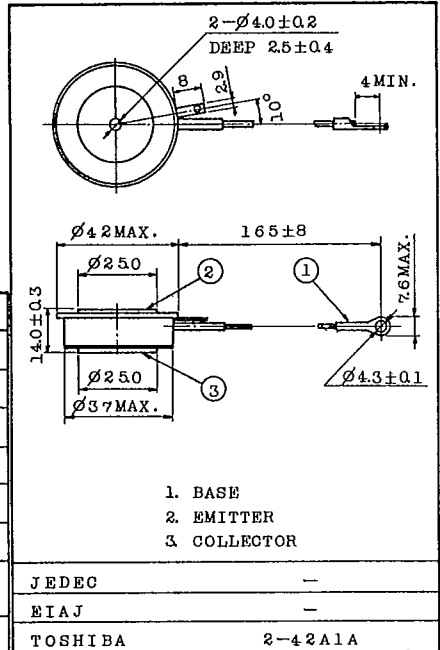
HIGH POWER SWITCHING APPLICATIONS.
DC-AC POWER INVERTER APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES:

- . High Voltage : $V_{CE0(SUS)}=450V$
- . Triple Diffused Design.
- . Darlington Design

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	$V_{CE0(SUS)}$	450	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	120	A
Emitter Current	I_E	-120	A
Base Current	I_B	8	A
Thermal Resistance (Double Side Cooling)	$R_{th(j-c)}$	0.13	$^\circ C/W$
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-40~150	$^\circ C$
Mounting Force Required	F	400 ± 40	kg

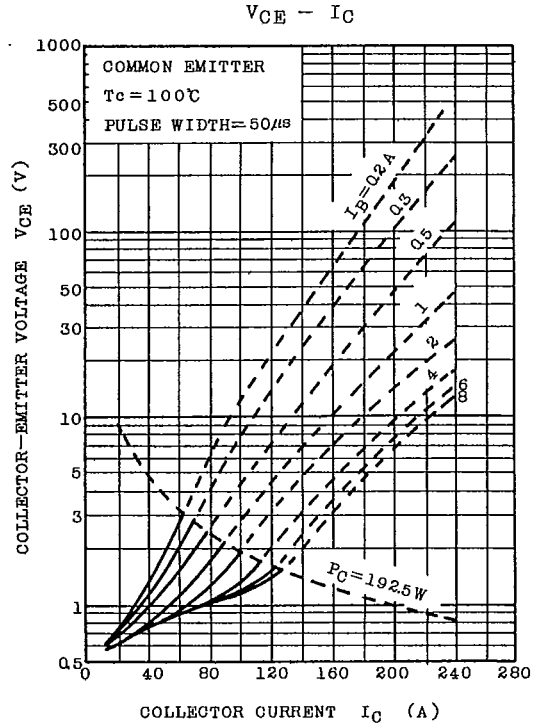
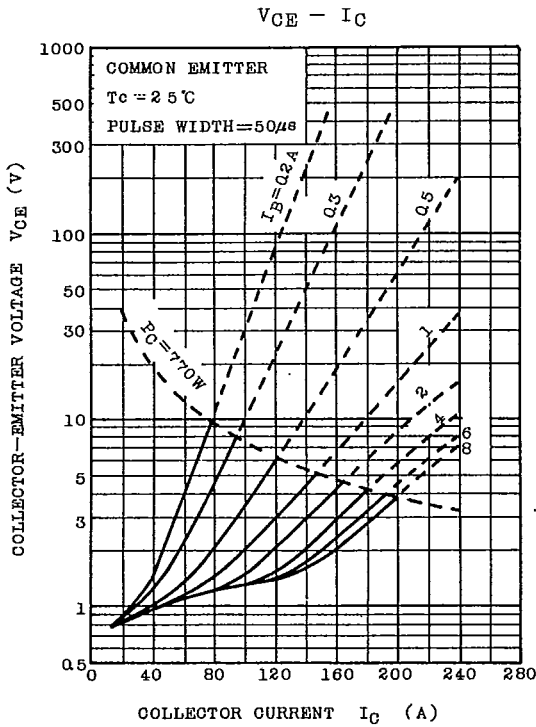
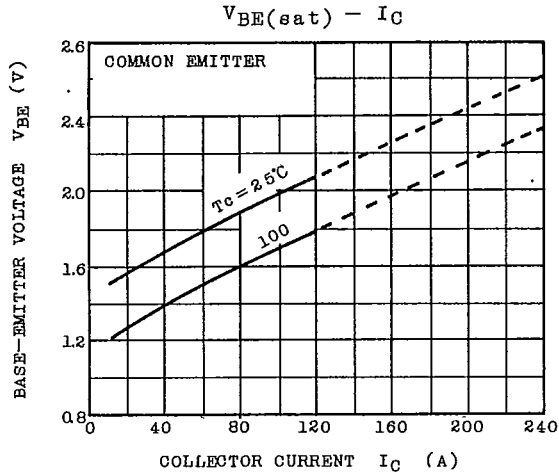


Weight : 70g

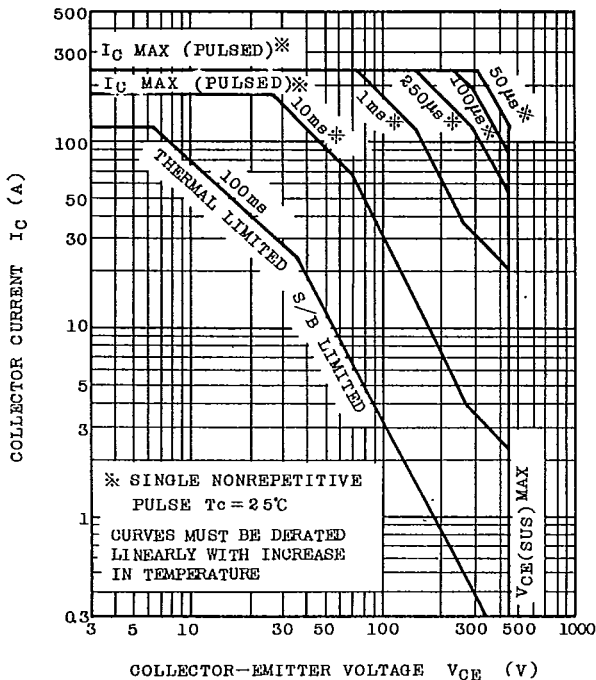
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=120A$	150	-	-		
		$V_{CE}=5V, I_C=60A$	-	500	-		
Collector-Emitter Sustaining Voltage	$V_{CE0(SUS)}$	$I_C=0.5A, L=40mH$	450	-	-	V	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=120A, I_B=2.4A$ (Note)	-	-	2.0	V	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-	-	2.5	V	
Collector Cut-off Current	I_{CBO}	$V_{CB}=600V, I_E=0$	-	-	2	mA	
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	150	mA	
Switching Time	Turn-on Time	t_{on}	$I_C=120A, I_{B1}=2.4A, -I_{B2}=2.4A, V_C=300V$	-	3	-	μs
	Storage Time	t_{stg}		-	12	-	μs
	Fall Time	t_f		-	8	-	μs

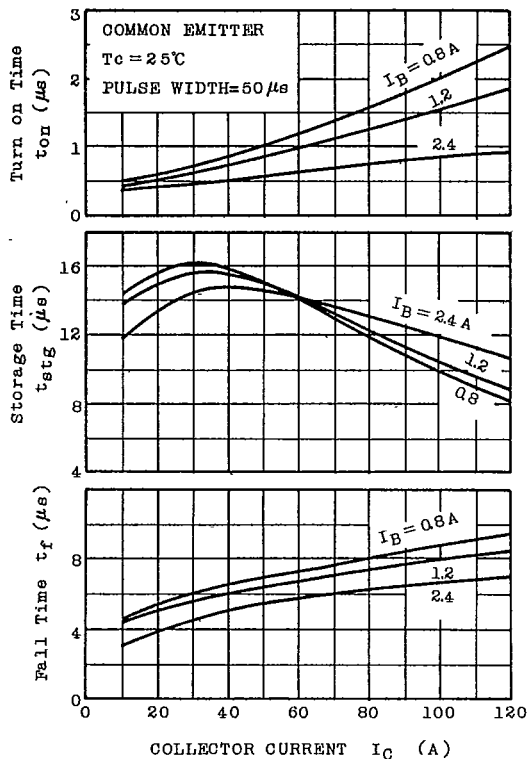
Note : Pulse Test; Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 3\%$
Mounting Force; $F=400kg$



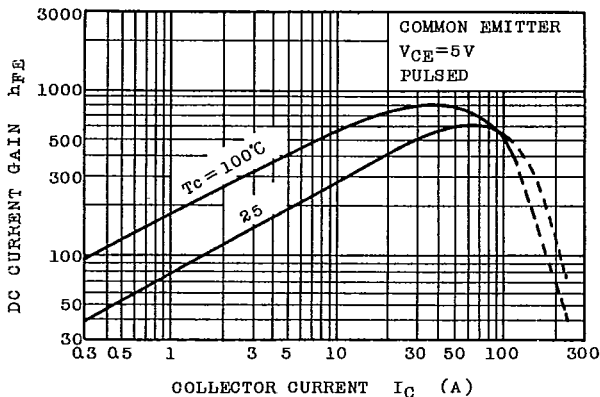
SAFE OPERATING AREA



SWITCHING CHARACTERISTICS



$h_{FE} - I_C$



TRANSIENT THERMAL IMPEDANCE (JUNCTION - CASE)

