

2SD647A 2SD697A

SILICON NPN TRIPLE DIFFUSED MESA TYPE (DARLINGTON POWER)

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

FEATURES:

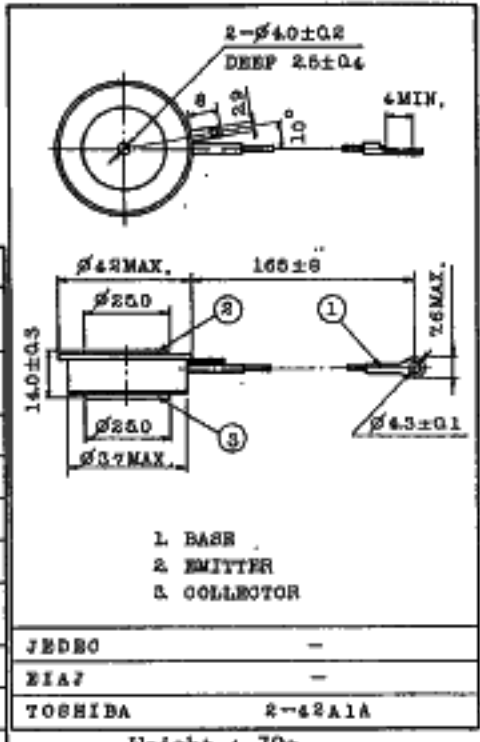
- High Voltage : $V_{CE0(SUS)} \geq 450V$ (2SD697A)
- Triple Diffused Design.
- Darlington Design.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	800	V
		500	
Collector-Emitter Voltage	V _{CE0(SUS)}	600	V
		450	
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	100	A
Emitter Current	I _E	-100	A
Base Current	I _B	6	A
Thermal Resistance (Double Side Cooling)	R _{th(j-c)}	0.13	°C/W
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-40 ~ 150	°C
Mounting Force Required	F	400±40	kg

INDUSTRIAL APPLICATIONS

Unit in mm



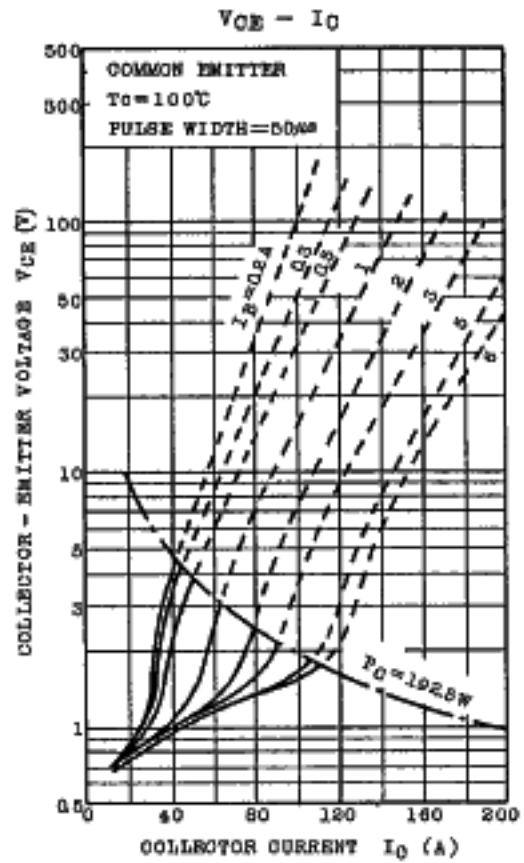
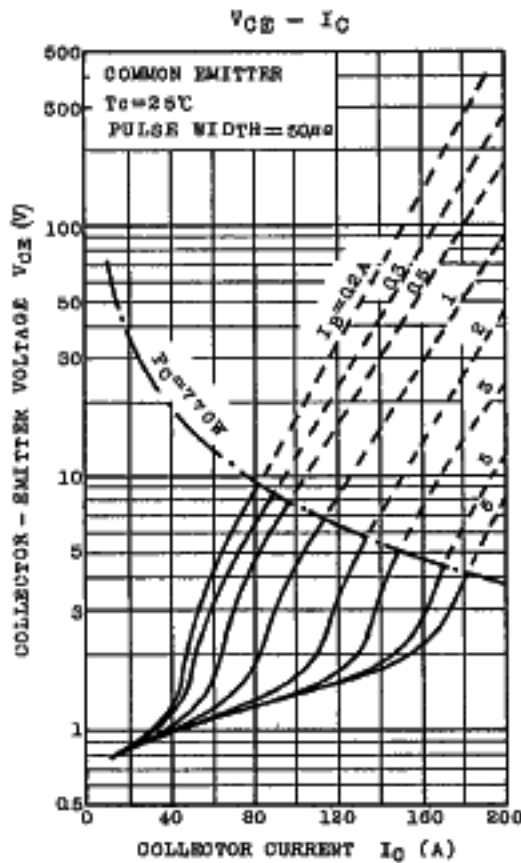
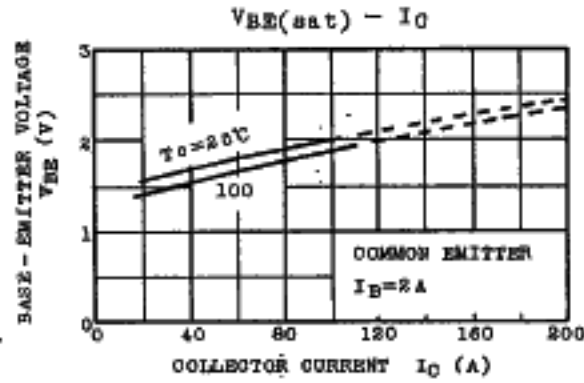
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =100A	100	-	-	
		V _{CE} =5V, I _C =50A	-	500	-	
Collector-Emitter Sustaining Voltage	V _{CE0(SUS)}	I _C =0.5A, L=40mH	600	-	-	V
			450			
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =100A, I _B =2A (Note)	-	-	2.0	V
Base-Emitter Saturation Voltage	V _{BE(sat)}		-	-	2.5	V
Collector Cut-off Current	I _{CB0}	V _{CE} =800V, I _B =0	-	-	2	mA
		V _{CE} =500V, I _B =0	-	-	2	
Emitter Cut-off Current	I _{EB0}	V _{EB} =5V, I _C =0	-	-	200	mA
Switching Time	Turn-on Time	t _{on}	-	2.5	-	μs
	Storage Time	t _{stg}	-	20	-	μs
	Fall Time	t _f	-	4	-	μs

Note : Pulse Test; Pulse Width ≤ 300μs, Duty Cycle ≤ 3%
Mounting Force; P=400kg

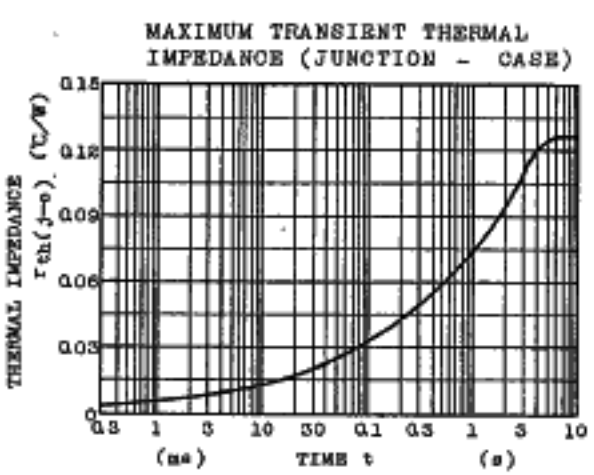
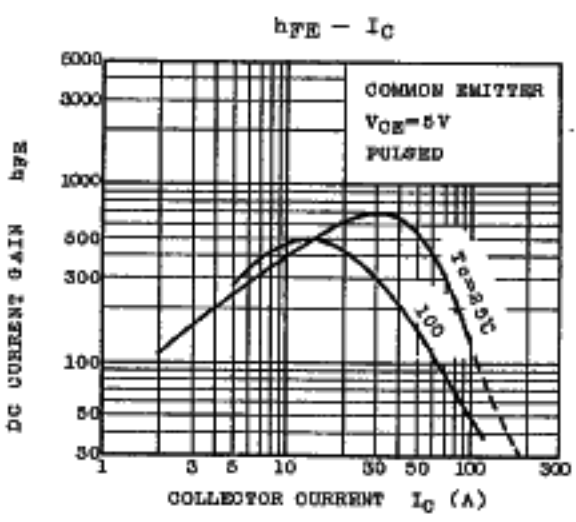
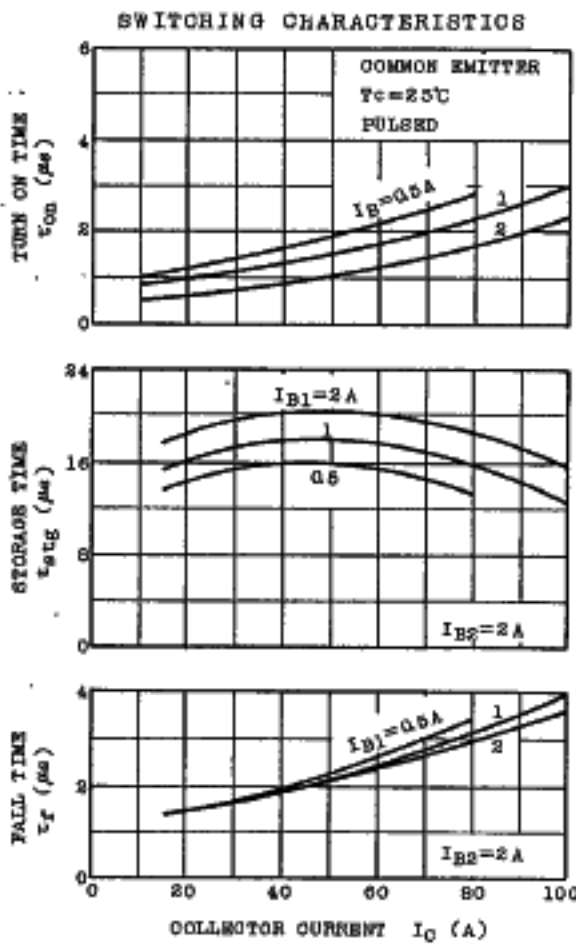
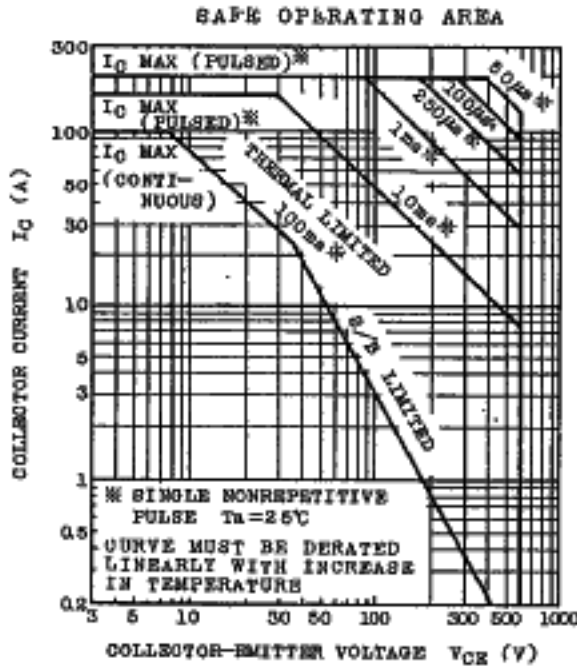
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