SILICON NPN TRIPLE DIFFUSED MESA TYPE

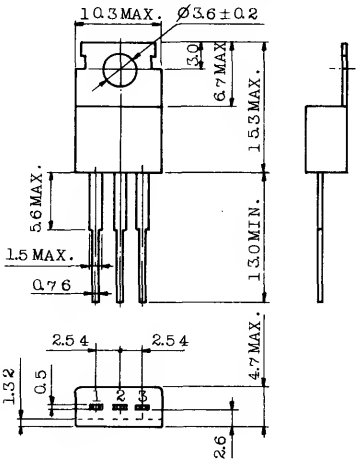
2SD841

HIGH VOLTAGE SWITCHING APPLICATIONS.

FEATURES:

- High Voltage : V_{CBO}=800V
- Low $V_{CE(sat)}$: $V_{CE(sat)}$=1.0V(Max.)(I_C=0.5A, I_B=0.05A)
- High Speed Switching : t_f=1.0μs (Max.)
- Glass Passivated Collector-Base Junction.

Unit in mm



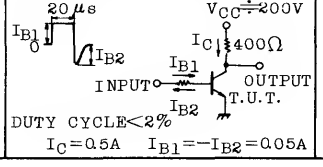
JEDEC	TO-220AB
EIAJ	SC-46
TOSHIBA	2-10A1A

Weight : 1.9g
Mounting kit No. AC75

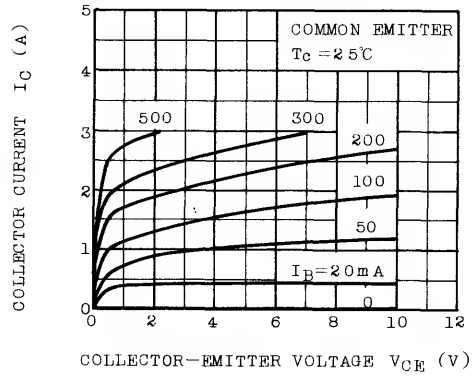
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	800	V
Collector-Emitter Voltage		V_{CEO}	400	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	3	A
Base Current		I_B	1.5	A
Collector Power Dissipation	Ta=25°C	P_C	1.5	W
	Tc=25°C		40	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

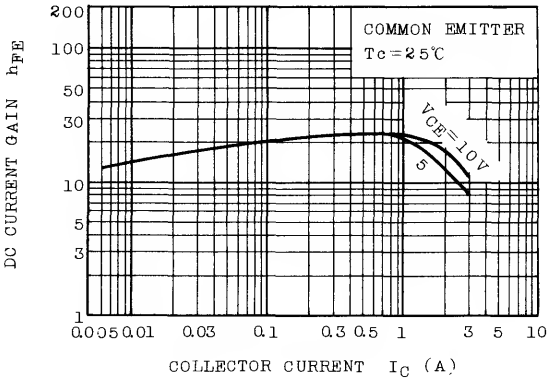
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=800V, I_E=0	-	-	1	mA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	1	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	400	-	-	V
DC Current Gain	$h_{FE(1)}$	V_{CE}=5V, I_C=10mA	8	-	-	
	$h_{FE(2)}$	V_{CE}=5V, I_C=0.5A	10	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=0.5A, I_B=0.05A	-	-	1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=0.5A, I_B=0.05A	-	-	1.5	V
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	75	-	pF
Transition Frequency	f_T	V_{CE}=10V, I_E=-0.1A	-	4	-	MHz
Fall Time	t_f		-	-	1.0	μs

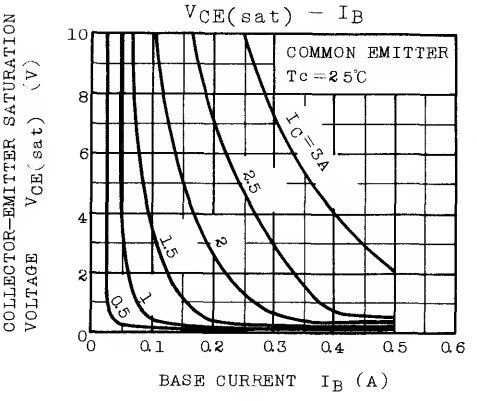
I_C - V_{CE}



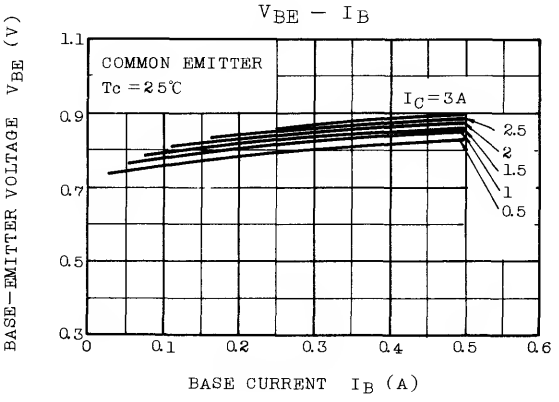
h_{FE} – I_C



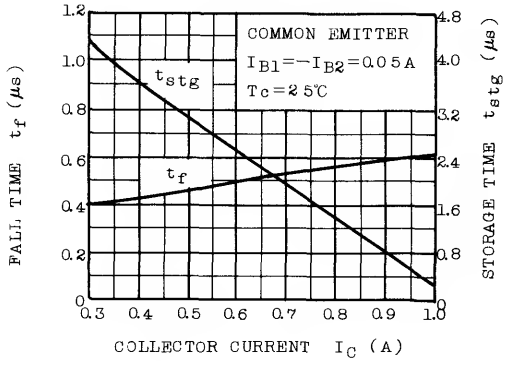
$V_{CE(sat)}$ – I_B



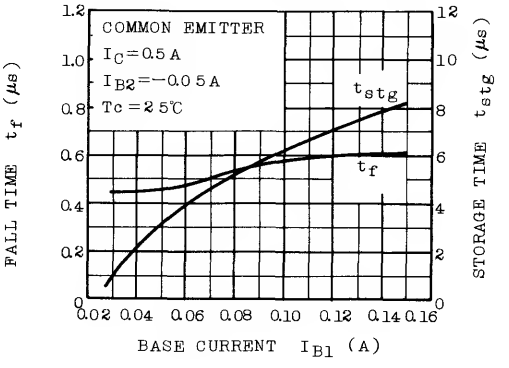
V_{BE} – I_B



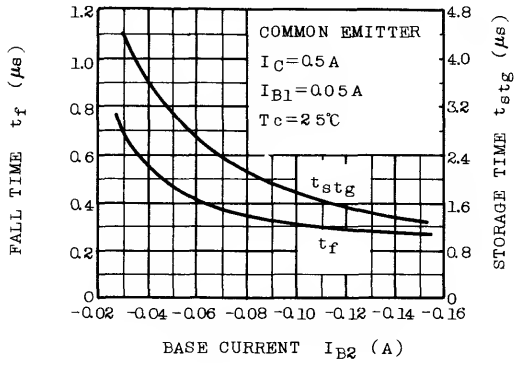
SWITCHING CHARACTERISTICS



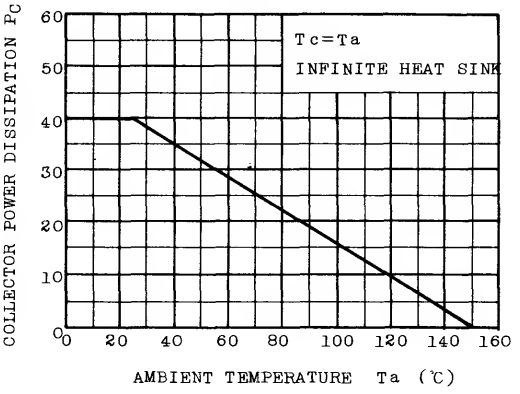
SWITCHING CHARACTERISTICS



SWITCHING CHARACTERISTICS



P_C — Ta



SAFE OPERATING AREA