

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07808 DT-33-11

SILICON NPN TRIPLE DIFFUSED MESA TYPE

**2SD841**

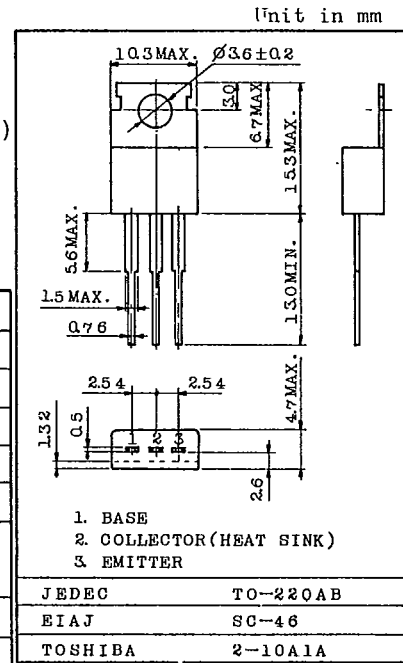
## HIGH VOLTAGE SWITCHING APPLICATIONS.

## FEATURES:

- High Voltage :  $V_{CB0}=800V$
- Low  $V_{CE(sat)}$  :  $V_{CE(sat)}=1.0V(\text{Max.}) (I_C=0.5A, I_B=0.05A)$
- High Speed Switching :  $t_f=1.0\mu s (\text{Max.})$
- Glass Passivated Collector-Base Junction.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Base Voltage	$V_{CB0}$	800	V	
Collector-Emitter Voltage	$V_{CE0}$	400	V	
Emitter-Base Voltage	$V_{EB0}$	5	V	
Collector Current	$I_C$	3	A	
Base Current	$I_B$	1.5	A	
Collector Power Dissipation	$P_C$	$T_a=25^\circ C$	1.5	W
		$T_c=25^\circ C$	40	
Junction Temperature	$T_j$	150	$^\circ C$	
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$	



Weight : 1.9g

Mounting kit No. AC75

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

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	$t_f$	<p><math>V_{CC}=200V</math> <math>I_{C1}=400\Omega</math> INPUT T.U.T. OUTPUT T.U.T. DUTY CYCLE &lt; 2% <math>I_C=0.5A, I_{B1}=-I_{B2}=0.05A</math></p>	-	-	1.0	$\mu s$

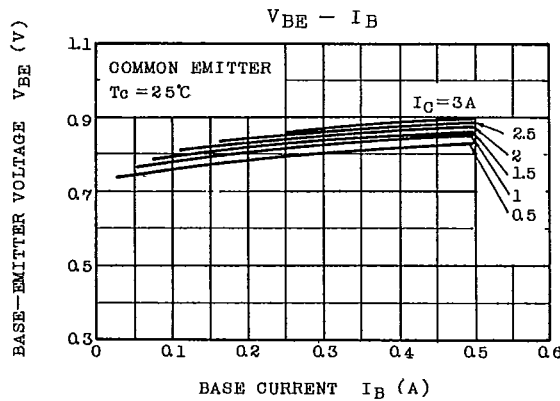
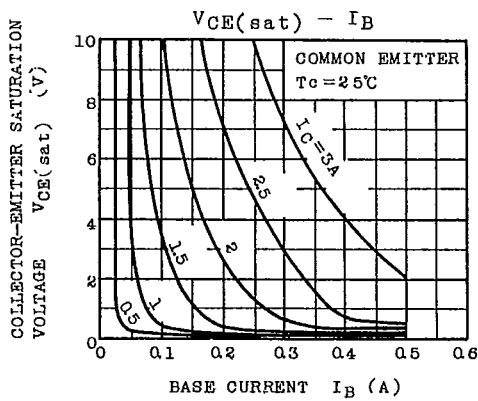
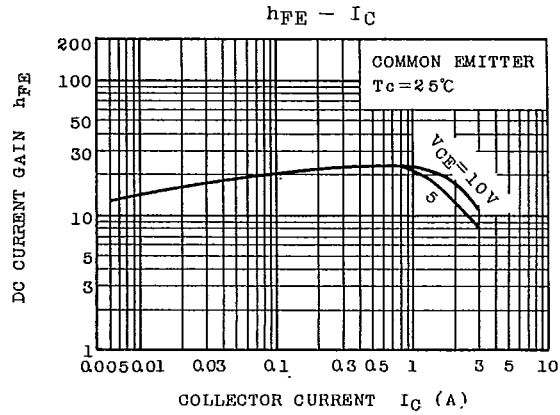
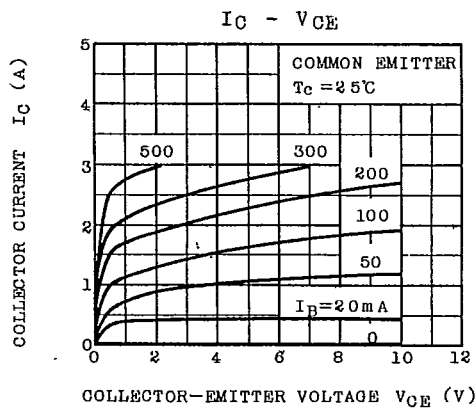
TOSHIBA CORPORATION

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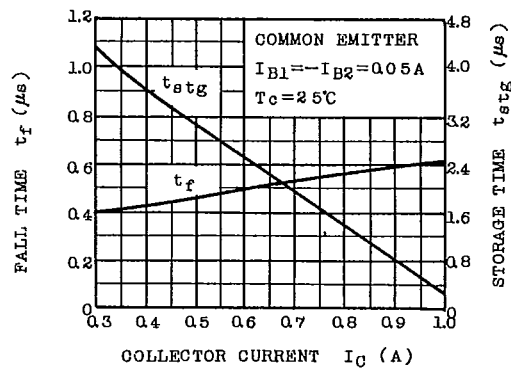
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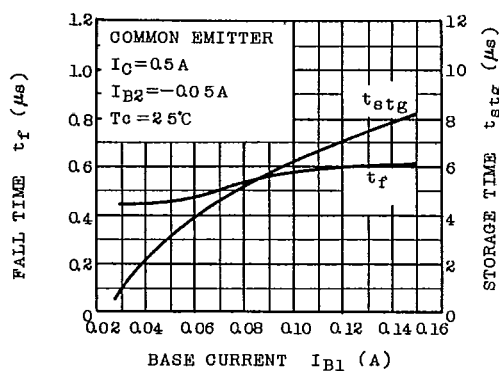
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**SWITCHING CHARACTERISTICS**



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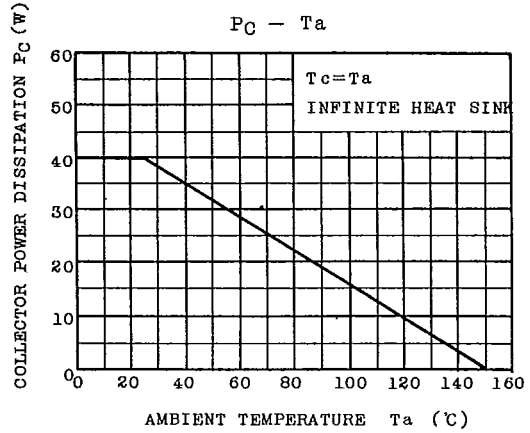
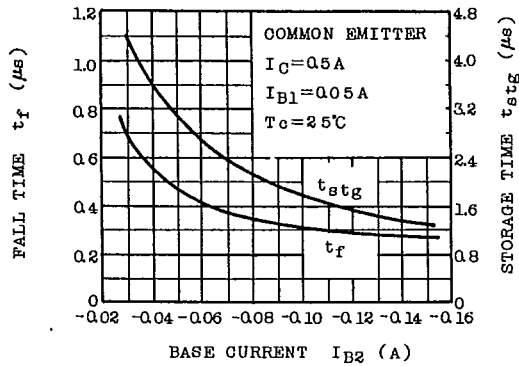


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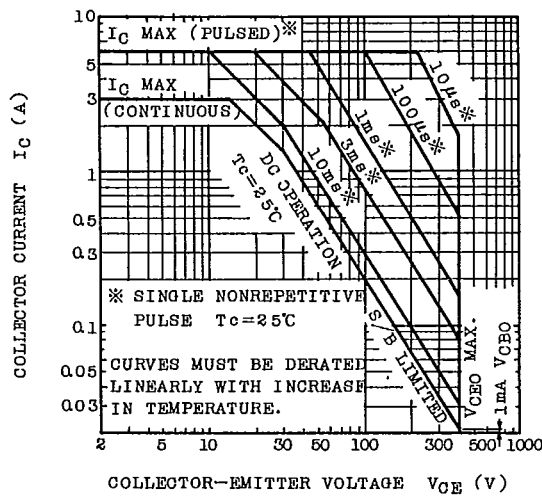
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SWITCHING CHARACTERISTICS



SAFE OPERATING AREA



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