2SD1069

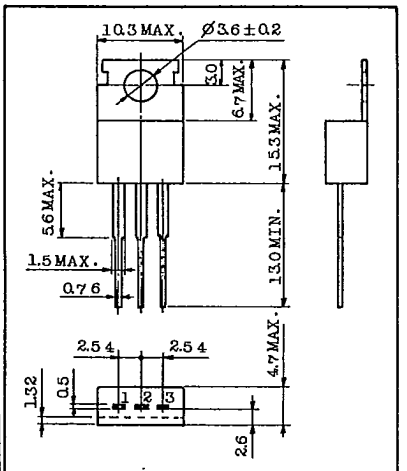
SILICON NPN DOUBLE DIFFUSED TYPE (PCT PROCESS)

TV HORIZONTAL DEFLECTION OUTPUT APPLICATIONS.
HIGH VOLTAGE SWITCHING APPLICATIONS.

FEATURES:

. Built in Damper Type.
. High Collector Current Capability.
. High Collector Power Dissipation Capability.

Unit in mm



1. BASE
2. COLLECTOR(HEAT SINK)
3. EMITTER

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

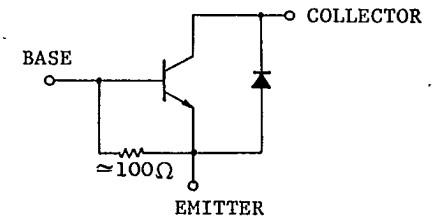
Mounting kit No. AC75

Weight : 1.9 g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	300	V
Collector-Emitter Voltage		V_{CEO}	150	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current		I_C	7	A
Collector Current (Peak)		I_{CP}	15	A
Base Current		I_{BM}	2	A
Collector Power Dissipation	Ta=25°C	P_C	1.75	W
	Tc=25°C		40	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CES}	V_{CE}=250V, V_{BE}=0	-	-	1.0	mA
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	I_C=0.1A, L=50mH	150	-	-	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=1mA, I_E=0	300	-	-	V
Emitter-Base Breakdown Voltage	V_{EBO}	I_E=0.1A, I_C=0	6	-	-	V
DC Forward Current Transfer Ratio	h_{FE}	V_{CE}=1.5V, I_C=5A	10	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=5A, I_B=0.5A	-	-	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=5A, I_B=0.5A	-	-	1.5	V
Damper Diode Forward Voltage	$-V_F$	I_C=-6A	-	-	1.8	V
Collector Current Fall Time	t_f	I_{cp}=5A, $I_{B1(end)}$=0.5A	-	-	1.0	μs
Transition Frequency	f_T	V_{CE}=10V, I_C=0.2A	-	18	-	MHz

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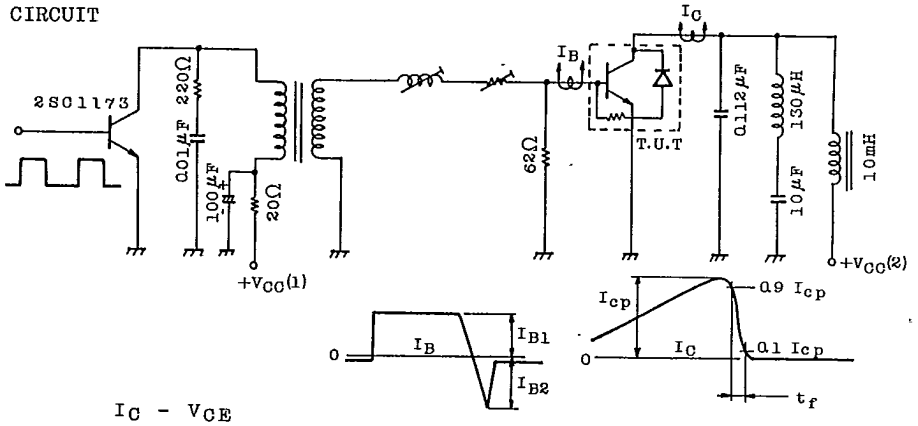
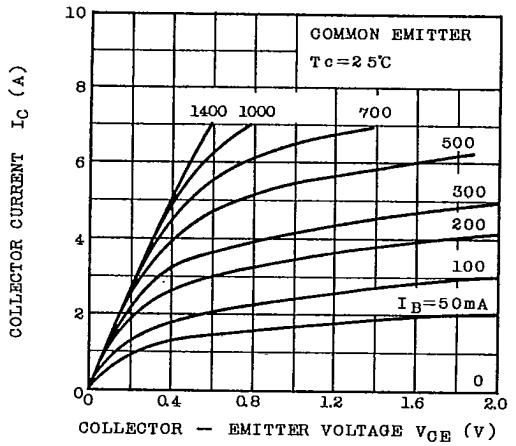
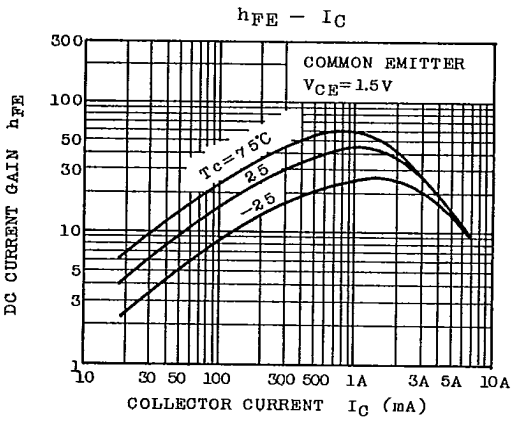
TEST CIRCUIT



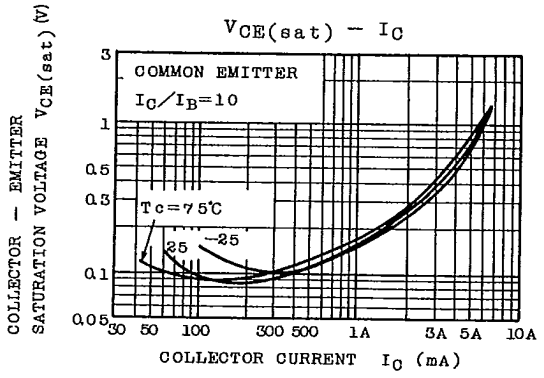
I_C - V_{CE}



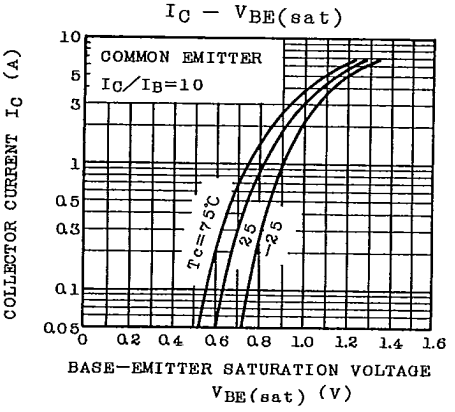
h_{FE} — I_C



$V_{CE(sat)}$ — I_C



I_C — $V_{BE(sat)}$



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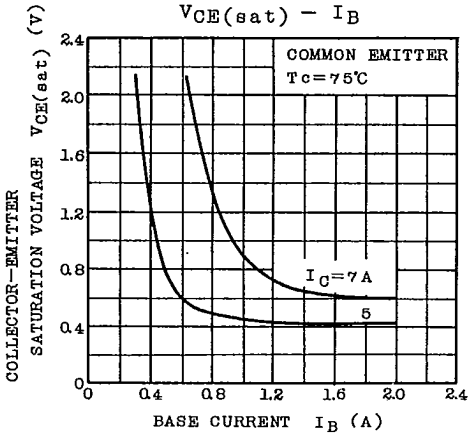
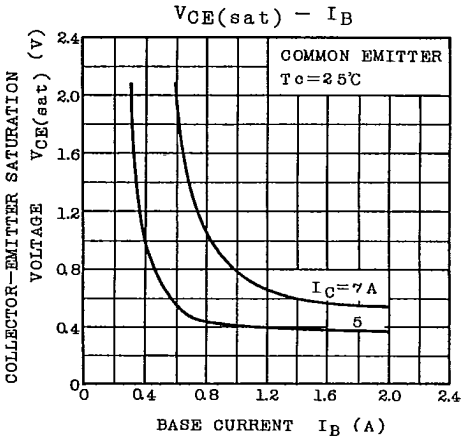
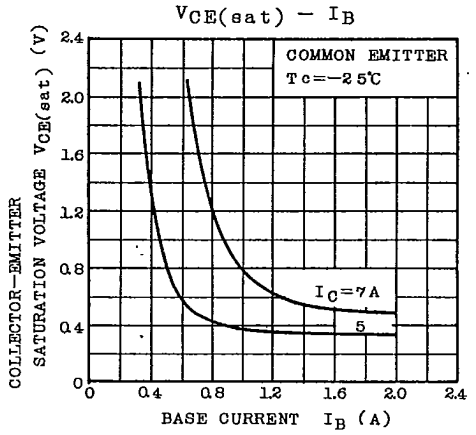
$V_{CE(sat)} - I_B$



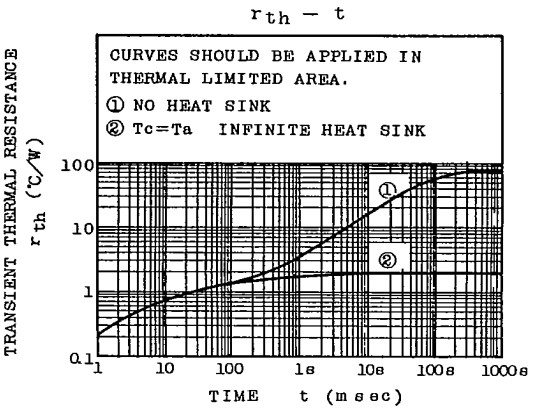
$V_{CE(sat)} - I_B$



$V_{CE(sat)} - I_B$



$r_{th} - t$



t_f − Tc (Typical)