2SD1361

SILICON NPN TRIPLE DIFFUSED TYPE
(DARLINGTON POWER)

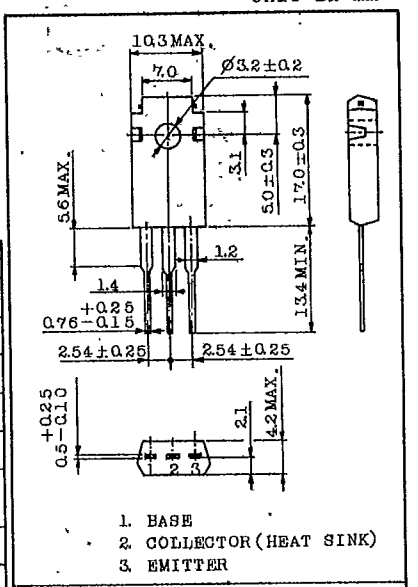
IGNITER APPLICATIONS.
HIGH VOLTAGE SWITCHING APPLICATIONS.

INDUSTRIAL APPLICATIONS

FEATURES:

- High DC Current Gain : h_{FE}=2000(Min.)(V_{CE}=2V, I_C=2A)

Unit in mm



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

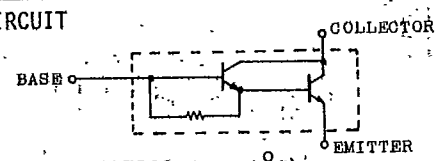
JEDEC	–
EIAJ	–
TOSHIBA	2-10K1A

Weight : 2.0g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	250	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	6	A
Base Current	I_B	1	A
Collector Power Dissipation (Tc=25°C)	P_C	30	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

EQUIVALENT CIRCUIT

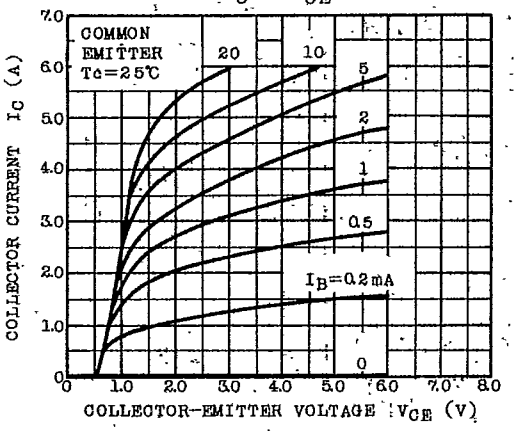


ELECTRICAL CHARACTERISTICS (Ta=25°C)

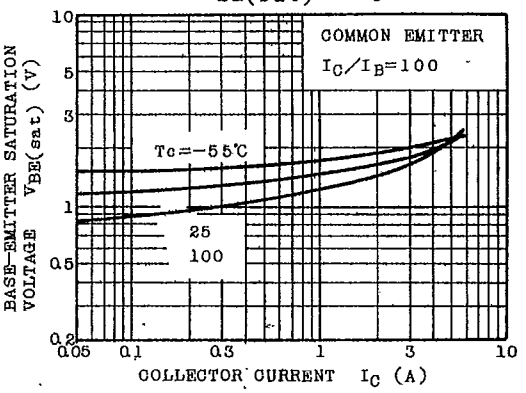
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=300V, I_E=0	–	–	0.5	mA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	–	–	0.5	mA
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	I_C=0.5A, L=40mH	250	–	–	V
DC Current Gain		$h_{FE(1)}$	V_{CE}=2V, I_C=2A	2000	–	–	
		$h_{FE(2)}$	V_{CE}=2V, I_C=4A	200	–	–	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	I_C=4A, I_B=0.04A	–	–	2.0	V
	Base-Emitter	$V_{BE(sat)}$	I_C=4A, I_B=0.04A	–	–	2.5	
Collector Output Capacitance		C_{ob}	V_{CB}=50V, I_E=0, f=1MHz	–	35	–	pF
Switching Time	Turn-on Time	t_{on}	20μs, INPUT, I_{B1}, I_{B2}, OUTPUT, 25Ω, I_{B1}=−I_{B2}=0.04A, DUTY CYCLE≤1%, V_{CC}=100V	–	1	–	μs
	Storage Time	t_{stg}		–	8	–	
	Fall Time	t_f		–	5	–	

2SD1361

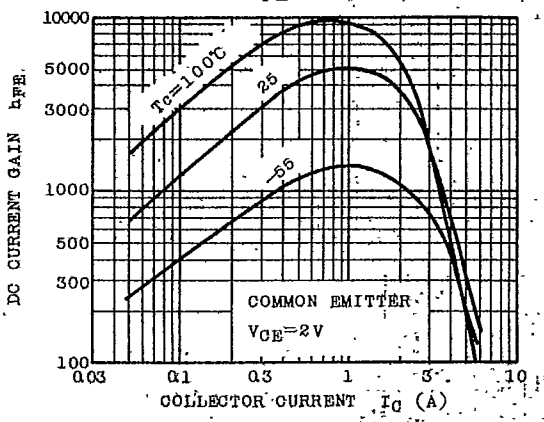
$I_C - V_{CE}$



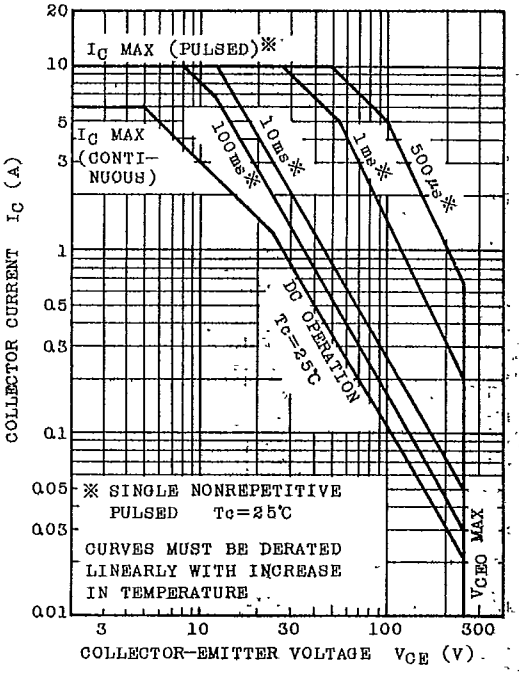
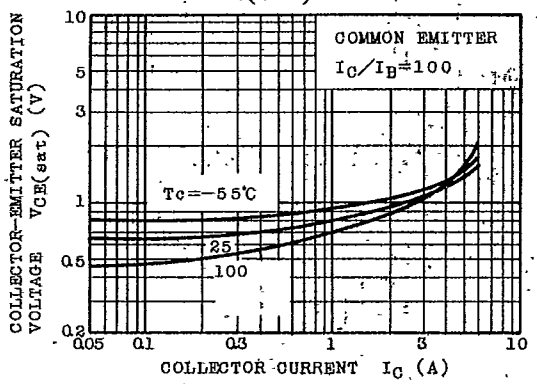
$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



SAFE OPERATING AREA



$V_{CE(sat)} - I_C$