2SD1410

SILICON NPN TRIPLE DIFFUSED TYPE
(DARLINGTON POWER)

IGNITER APPLICATIONS.

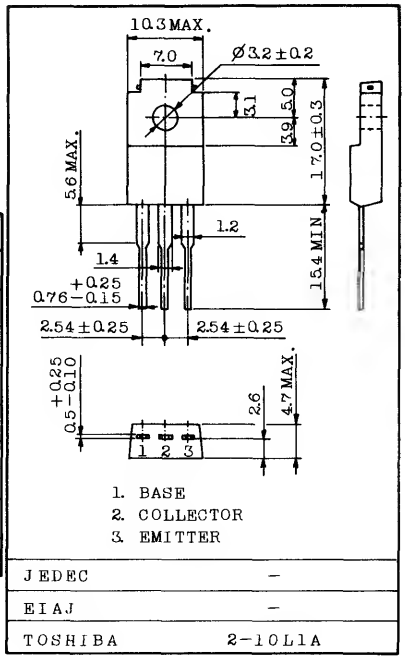
HIGH VOLTAGE SWITCHING APPLICATIONS.

INDUSTRIAL APPLICATIONS

FEATURES:

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

Unit in mm



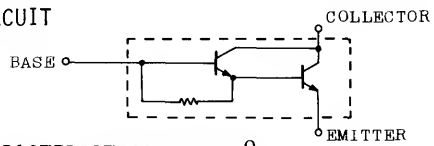
JEDEC	—
EIAJ	—
TOSHIBA	2-10L1A

Weight : 2.1g

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	Ta=25°C	P_C	2.0	W
	Tc=25°C		25	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

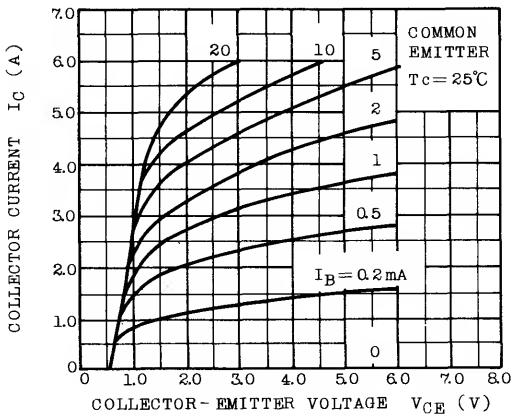
EQUIVALENT CIRCUIT



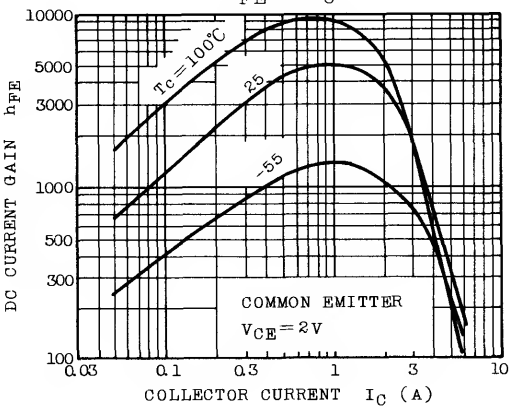
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=4A, I_B=0.04A	-	-	2.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=4A, I_B=0.04A	-	-	2.5	V
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}, OUTPUT, I_{B1}, I_{B2}, 25Ω	-	1	-	μs
	Storage Time	t_{stg}		-	8	-	
	Fall Time	t_f	I_{B1}=-I_{B2}=0.04A, DUTY CYCLE≦1%, V_{CC}=100V	-	5	-	

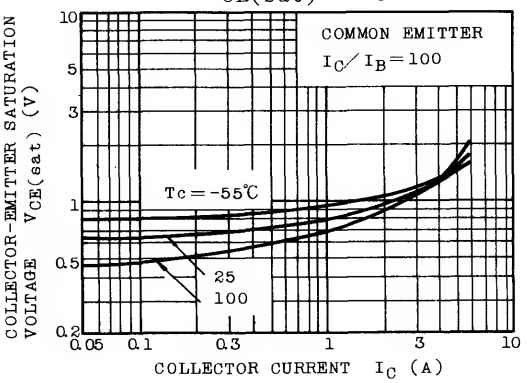
$I_C - V_{CE}$



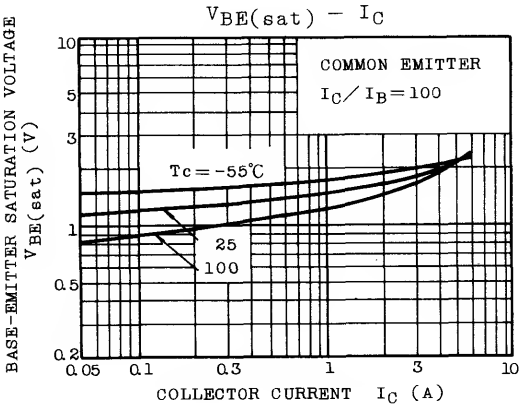
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



SAFE OPERATING AREA