

TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD633, 2SD635

HIGH POWER SWITCHING APPLICATIONS

INDUSTRIAL APPLICATIONS

HAMMER DRIVE, PULSE MOTOR DRIVE APPLICATIONS

Unit in mm

- High DC Current Gain : $h_{FE}=2000$ (Min.)
- Low Saturation Voltage : $V_{CE(sat)}=1.5V$ (Max.)
- Complementary to 2SB673 and 2SB675.

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

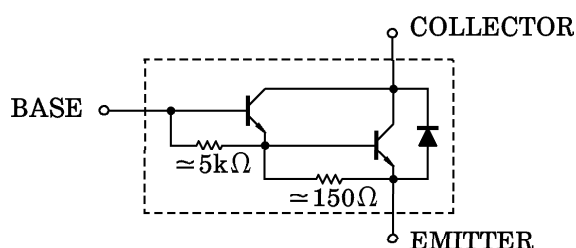
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	2SD633	100	V
	2SD635	60	
Collector-Emitter Voltage	2SD633	100	V
	2SD635	60	
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	7	A
	I_{CP}		
Base Current	I_B	0.7	A
Collector Power Dissipation ($T_c = 25^\circ C$)	P_C	40	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ C$

1. BASE	
2. COLLECTOR (HEAT SINK)	
3. EMITTER	
JEDEC	TO-220AB
EIAJ	SC-46
TOSHIBA	2-10A1A

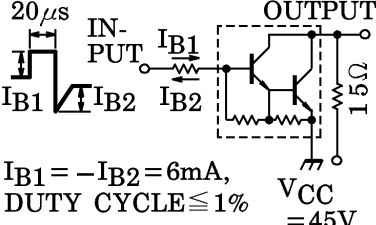
Weight : 1.9g (Typ.)

Mounting kit No. AC75

EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SD633	I_{CBO}	$V_{CB}=100V, I_E=0$	—	—	100	μA
	2SD635		$V_{CB}=60V, I_E=0$	—	—	100	
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	—	—	3.0	mA
Collector-Emitter Breakdown Voltage	2SD633	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	100	—	—	V
	2SD635			60	—	—	
DC Current Gain		$h_{FE}(1)$	$V_{CE}=3V, I_C=3A$	2000	—	15000	
		$h_{FE}(2)$	$V_{CE}=3V, I_C=7A$	1000	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}(1)$		$I_C=3A, I_B=6mA$	—	0.9	1.5	V
	$V_{CE(sat)}(2)$		$I_C=7A, I_B=14mA$	—	1.2	2.0	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=3A, I_B=6mA$	—	1.5	2.5	V
Switching Time	Turn-on Time	t_{on}	 20μs IN-PUT I_{B1} I_{B2} OUTPUT $V_{CC}=45V$	—	0.8	—	μs
	Storage Time	t_{stg}		—	3.0	—	
	Fall Time	t_f		—	2.5	—	

