

2SD640

SILICON NPN TRIPLE DIFFUSED TYPE

INDUSTRIAL APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS.

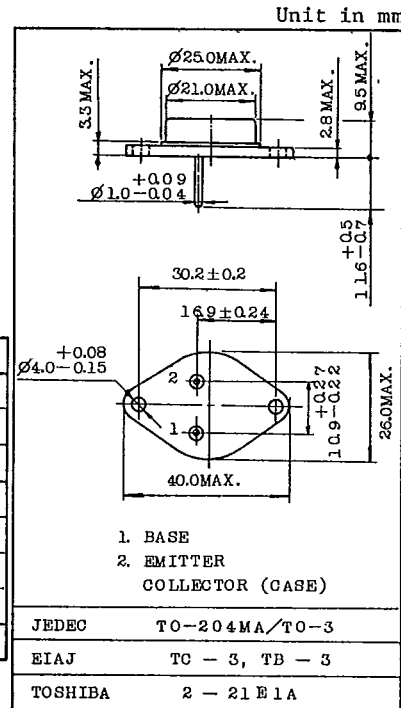
HIGH POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High Voltage : $V_{CE0}=400V$
- Low Saturation Voltage : $V_{CE(sat)}=1.5V$ (Max.)
($I_C=5A, I_B=1A$)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	7	A
Base Current	I_B	2	A
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	100	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-65~150	$^\circ C$



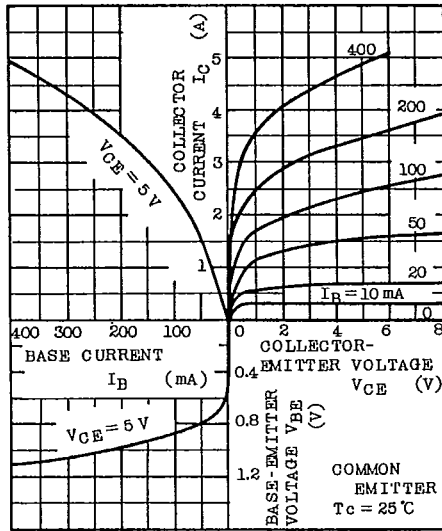
Mounting Kit No.AC73
Weight : 15.8g

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

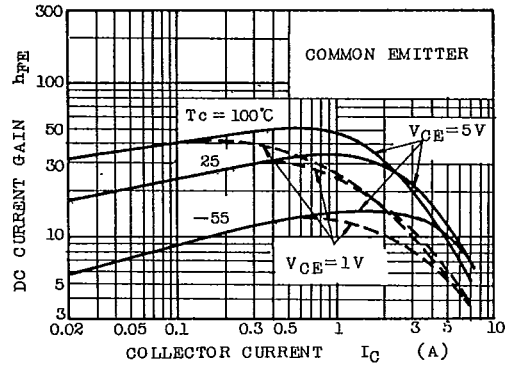
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=500V, I_E=0$	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	400	-	-	V
DC Current Gain		h_{FE}	$V_{CE}=5V, I_C=1A$	25	-	140	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=5A, I_B=1A$	-	-	1.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=5A, I_B=1A$	-	-	2.0	V
Transition Frequency		f_T	$V_{CE}=10V, I_C=0.5A$	-	3	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=50V, I_E=0, f=1MHz$	-	70	-	pF
Switching Time	Turn-on Time	t_{on}		-	1.0	-	μs
	Storage Time	t_{stg}		-	3.0	-	
	Fall Time	t_f		-	0.6	-	

TOSHIBA CORPORATION

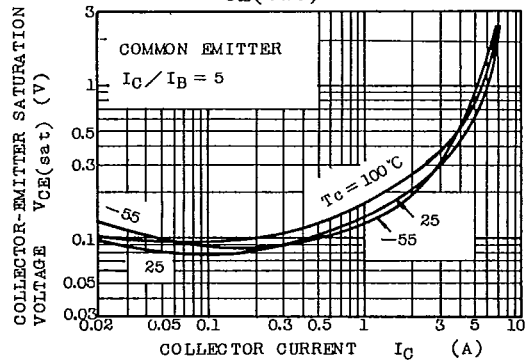
STATIC CHARACTERISTICS



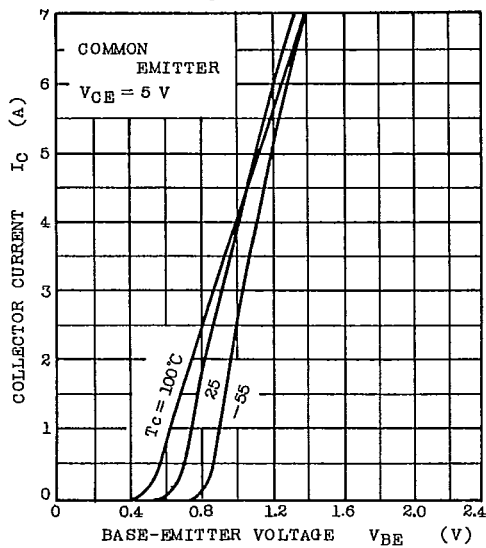
$h_{FE} - I_C$



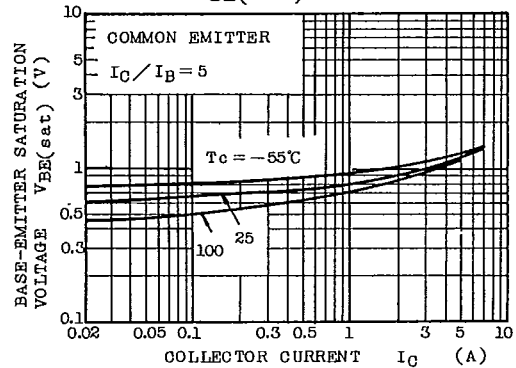
$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$V_{BE(sat)} - I_C$



2SD640

