

SILICON NPN TRIPLE DIFFUSED TYPE

# 2SD843

HIGH CURRENT SWITCHING APPLICATIONS.  
POWER AMPLIFIER APPLICATIONS.

**FEATURES:**

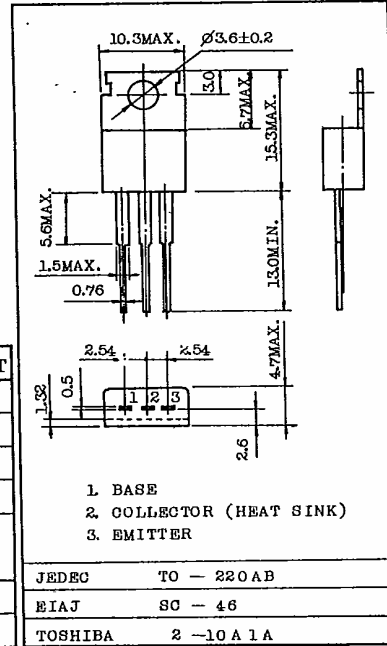
- Low Saturation Voltage  
:  $V_{CE(sat)}=0.5V$  (Max.) (at  $I_C=4A$ )
- Complementary to 2SB753.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	80	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	7	A
Collector Power Dissipation	PC	$T_a=25^\circ C$	1.5
		$T_c=25^\circ C$	40
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

**INDUSTRIAL APPLICATIONS**

Unit in mm



Mounting Kit No. AC75  
Weight : 1.9g

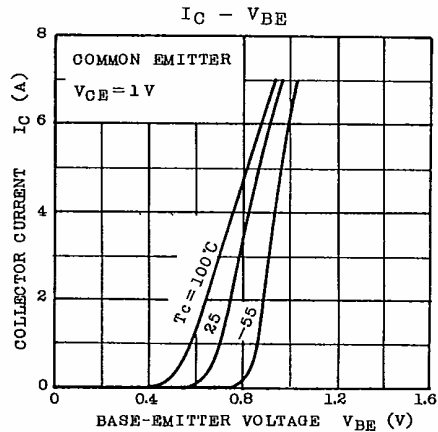
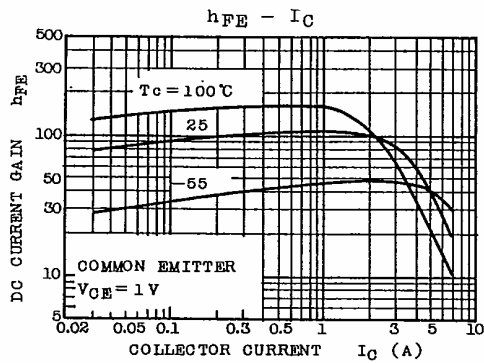
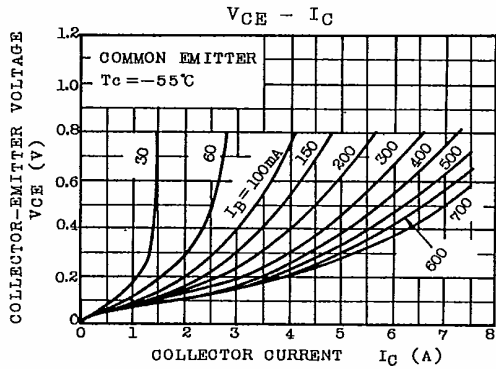
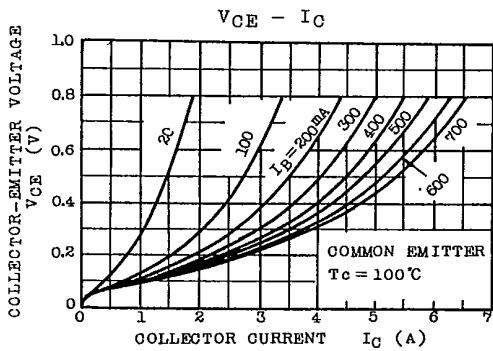
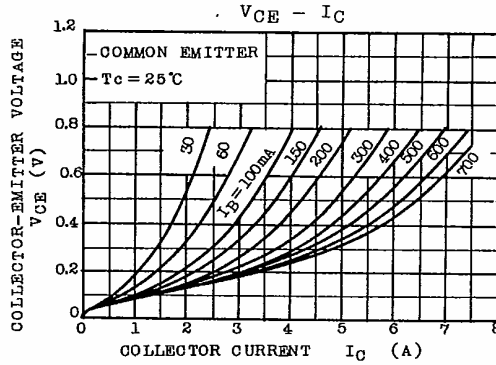
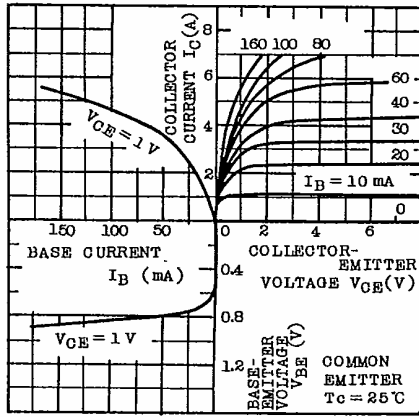
**ELECTRICAL CHARACTERISTICS** ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=100V, I_E=0$	-	-	5	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	5	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	80	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=4A$	30	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	-	0.25	0.5	V
	Base-Emitter	$V_{BE(sat)}$	-	0.9	1.4	
Transition Frequency	$f_T$	$V_{CE}=4V, I_C=1A$	-	10	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	250	-	pF
Switching Time	Turn-on Time	$t_{on}$	-	0.4	-	$\mu s$
	Storage Time	$t_{stg}$	-	2.5	-	
	Fall Time	$t_f$	-	0.5	-	

Note :  $h_{FE(1)}$  Classification 0 : 70~140, Y : 120~240

# 2SD843

## STATIC CHARACTERISTICS



TOSHIBA CORPORATION

