

# 2SD871

SILICON NPN TRIPLE DIFFUSED MESA TYPE

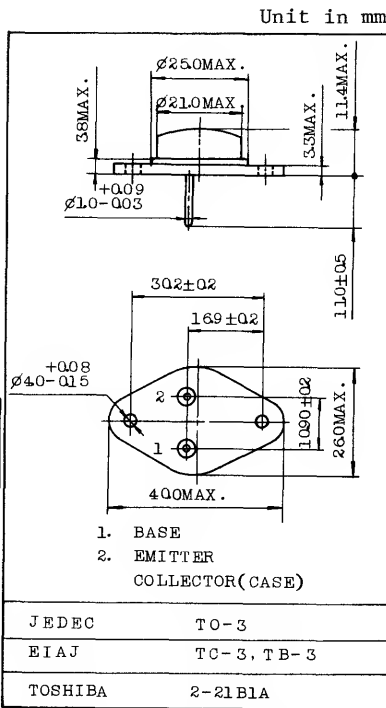
COLOR TV HORIZONTAL OUTPUT APPLICATIONS.

**FEATURES:**

- High Voltage :  $V_{CBO}=1500V$
- Low Saturation Voltage  
:  $V_{CE(sat)}=5V$  (Max.) ( $I_C=5A, I_B=1A$ )
- High Speed ;  $t_f=1.0\mu s$  (Max.) ( $I_{CP}=5A, I_{B1}(end)=1A$ )
- Built-in Damper Type.
- Glass Passivated Collector-Base Junction.

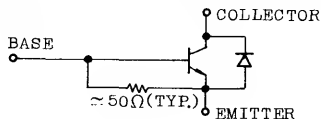
**MAXIMUM RATINGS** ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	1500	V
Collector-Emitter Voltage	$V_{CEO}$	600	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	6	A
Emitter Current	$I_E$	-6	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	50	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-65~150	$^\circ C$



Mounting kit No. AC42C  
Weight : 17g

**EQUIVALENT CIRCUIT**



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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=500V, I_E=0$	-	-	10	$\mu A$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=200mA, I_C=0$	5	-	-	V
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=1A$	8	12	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5A, I_B=1A$	-	3	5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5A, I_B=1A$	-	-	1.5	V
Forward Voltage (Damper Diode)	$-V_F$	$I_F=6A$	-	1.6	2.0	V
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=0.1A$	-	3	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	165	-	pF
Fall Time (Fig.)	$t_f$	$I_{CP}=5A, I_{B1}(end)=1A$	-	0.5	1.0	$\mu s$

Fig.  $t_f$  TEST CIRCUIT

