

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07971 DT-33-13

**2SD1431**

SILICON NPTRIPLE DIFFUSED MESA TYPE

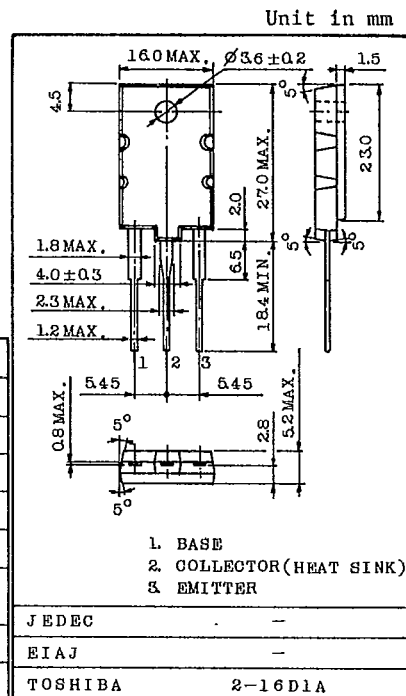
COLOR TV HORIZONTAL OUTPUT APPLICATIONS.

## FEATURES:

- High Voltage :  $V_{CB0}=1500V$
- Low Saturation Voltage  
:  $V_{CE(sat)}=5V(\text{Max.})$  ( $I_C=4A, I_B=0.8A$ )
- High Speed :  $t_f=1.0\mu s(\text{Max.})$
- Glass Passivated Collector-Base Junction

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

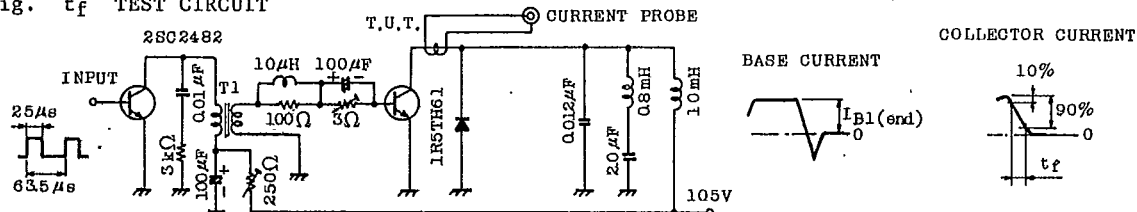
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	1500	V
Collector-Emitter Voltage	$V_{CEO}$	600	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_C$	5	A
Emitter Current	$I_E$	-5	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	80	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ C$



Weight : 5.2g

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 Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	1	mA
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=1A$	8	20	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=0.8A$	-	3	5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4A, I_B=0.8A$	-	-	1.5	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.)	$t_f$	$I_C=4A, I_{B1}(\text{end})=0.8A$	-	0.5	1.0	$\mu s$

Fig.  $t_f$  TEST CIRCUIT

TOSHIBA CORPORATION