

T-33-11

2SD1651



2039

NPN Triple Diffused Planar Silicon Transistor

Color TV Horizontal Deflection Output Applications(with Damper Diode)

©1749B

Applications

- . High-voltage, power switching

Features

- . Fast speed ($t_{max}=0.4\mu s$).
- . High reliability (Adoption of HVP process).
- . High breakdown voltage ($V_{CBO}=1500V$).
- . Micaless package facilitating mounting operation.

Absolute Maximum Ratings at $T_a=25^\circ C$

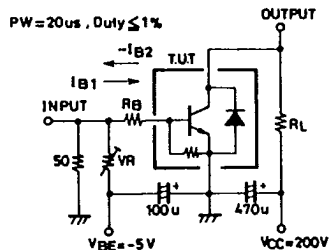
			unit
Collector to Base Voltage	V_{CBO}	1500	V
Collector to Emitter Voltage	V_{CEO}	800	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Peak Collector Current	i_{cp}	16	A
Collector Dissipation	P_C	60	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

$T_C=25^\circ C$

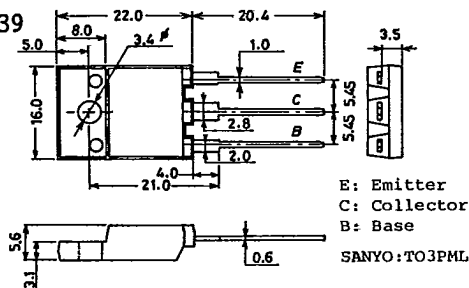
Electrical Characteristics at $T_a=25^\circ C$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=800V, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$	40		130	mA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=1A$	8			
Gain Bandwidth Product	f_T	$V_{CE}=10V, I_C=1A$		3		MHz
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4A, I_B=0.8A$			5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=4A, I_B=0.8A$			1.5	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=5mA, I_E=0$	1500			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=100mA, R_{BE}=\infty$	800			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=200mA, I_C=0$	7			V
Diode Forward Voltage	V_F	$I_{EC}=5A$			2	V
Fall Time	t_f	$I_C=4A, I_{B1}=0.8A, I_{B2}=-1.6A, V_{CC}=200V, R_L=50\Omega$			0.4	μs

Switching Time Test Circuit

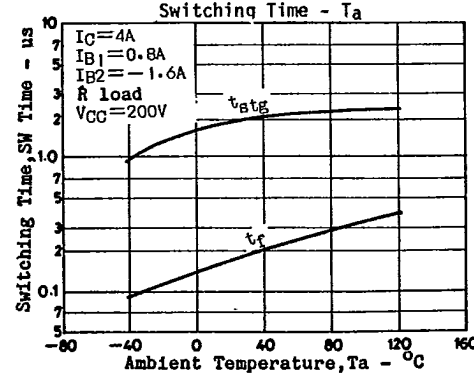
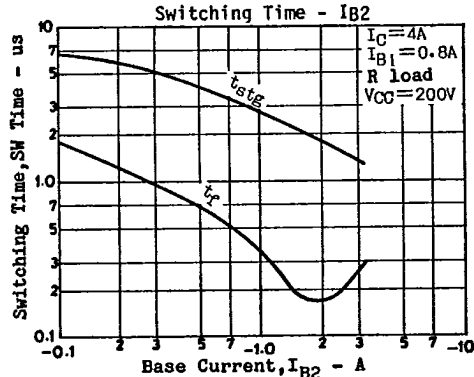
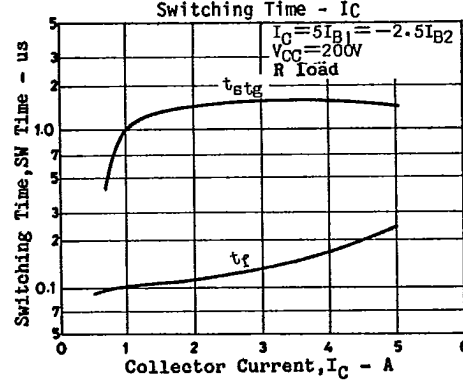
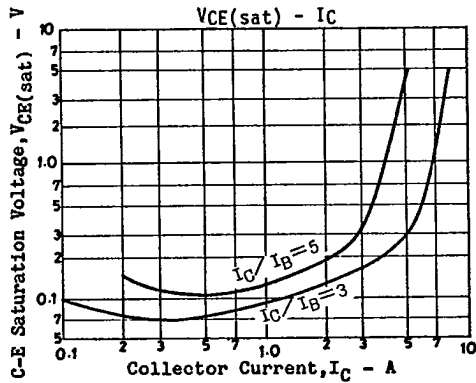
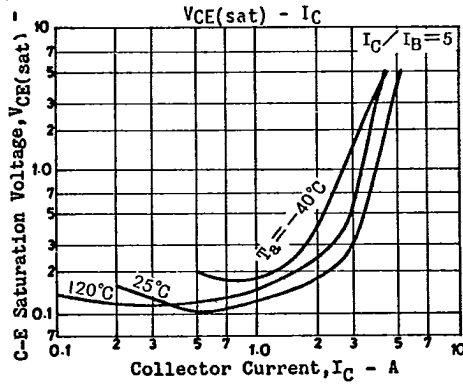
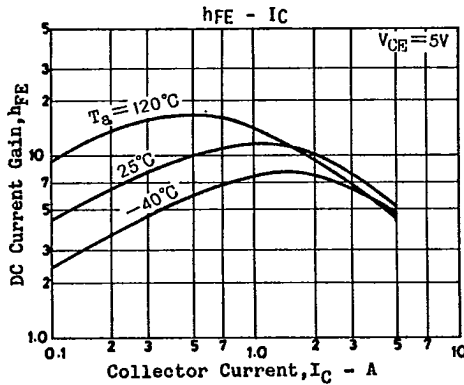
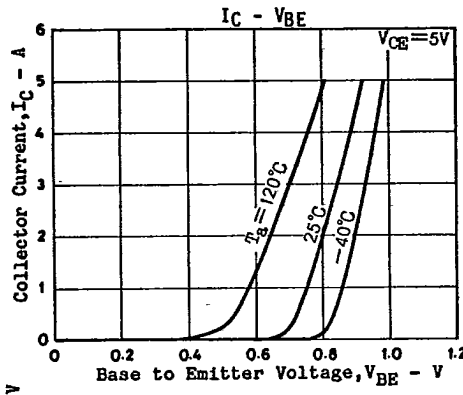
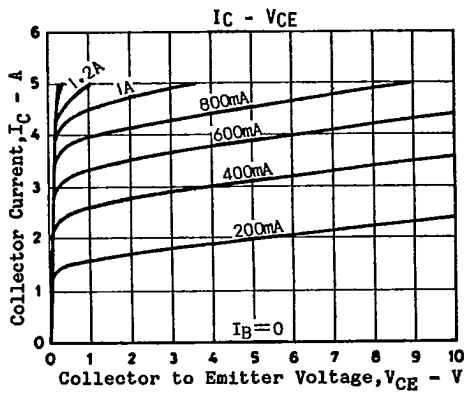


Case Outline 2039 (unit:mm)



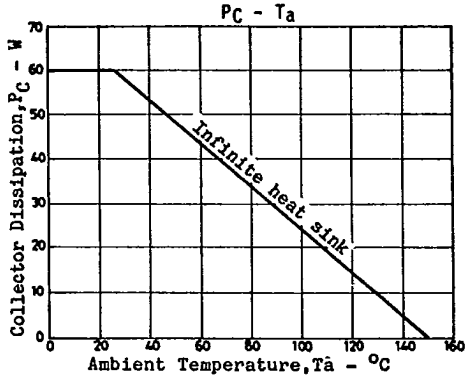
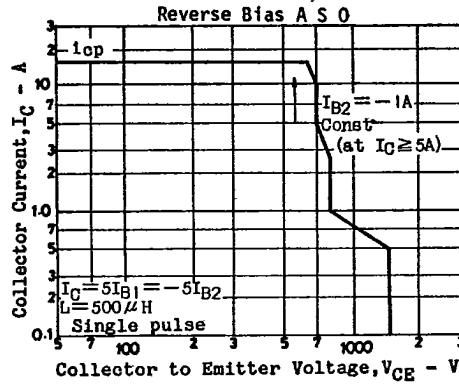
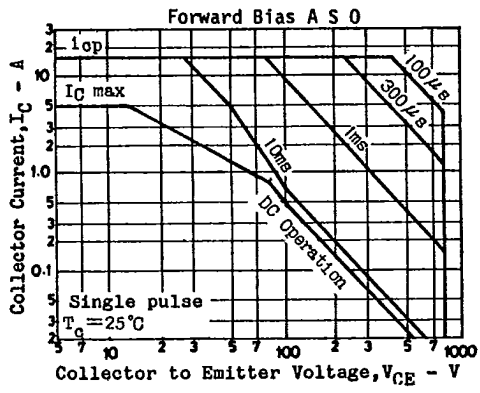
5277KI/D244KI, TS No. 1749-1/3

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Sample Application Circuit

