

Silicon NPN Power Transistors

2SD1654

**DESCRIPTION**

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- With TO-3PML package
- High voltage;high speed
- High reliability.

**APPLICATIONS**

- For color TV horizontal deflection output applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

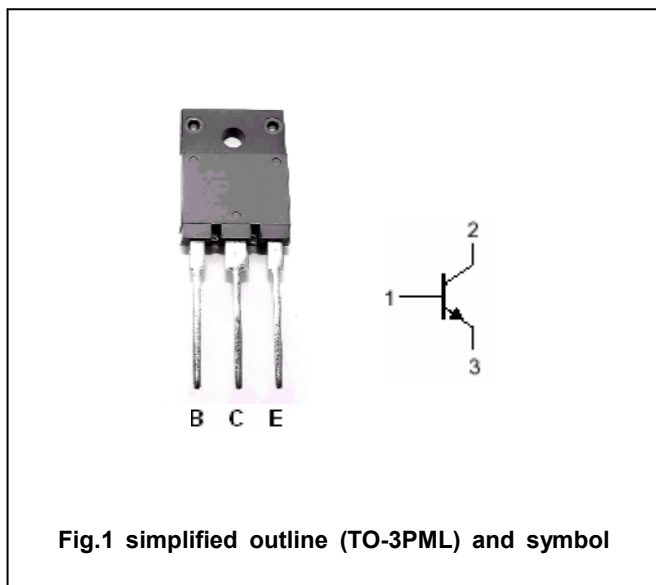


Fig.1 simplified outline (TO-3PML) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	800	V
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current		3.5	A
$I_{CM}$	Collector current-peak		10	A
$P_C$	Collector power dissipation	$T_C=25^\circ C$	50	W
$T_j$	Junction temperature		150	°C
$T_{stg}$	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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 $T_j=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=0.1\text{A}; R_{BE}=\infty$	800			
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=5\text{mA}; I_E=0$	1500			
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=2.5\text{A}; I_B=0.8\text{A}$			8.0	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=2.5\text{A}; I_B=0.8\text{A}$			1.5	V
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			1.0	mA
$I_{CBO}$	Collector cut-off current	$V_{CB}=800\text{V}; I_E=0$			10	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	8			
$f_T$	Transition frequency	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		3		MHz
$t_f$	Fall time	$I_C=3\text{A}; I_{B1}=0.8\text{A}; I_{B2}=-1.6\text{A}$ $V_{CC}=200\text{V}; R_L=66.7\Omega$			0.7	$\mu\text{s}$

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PACKAGE OUTLINE

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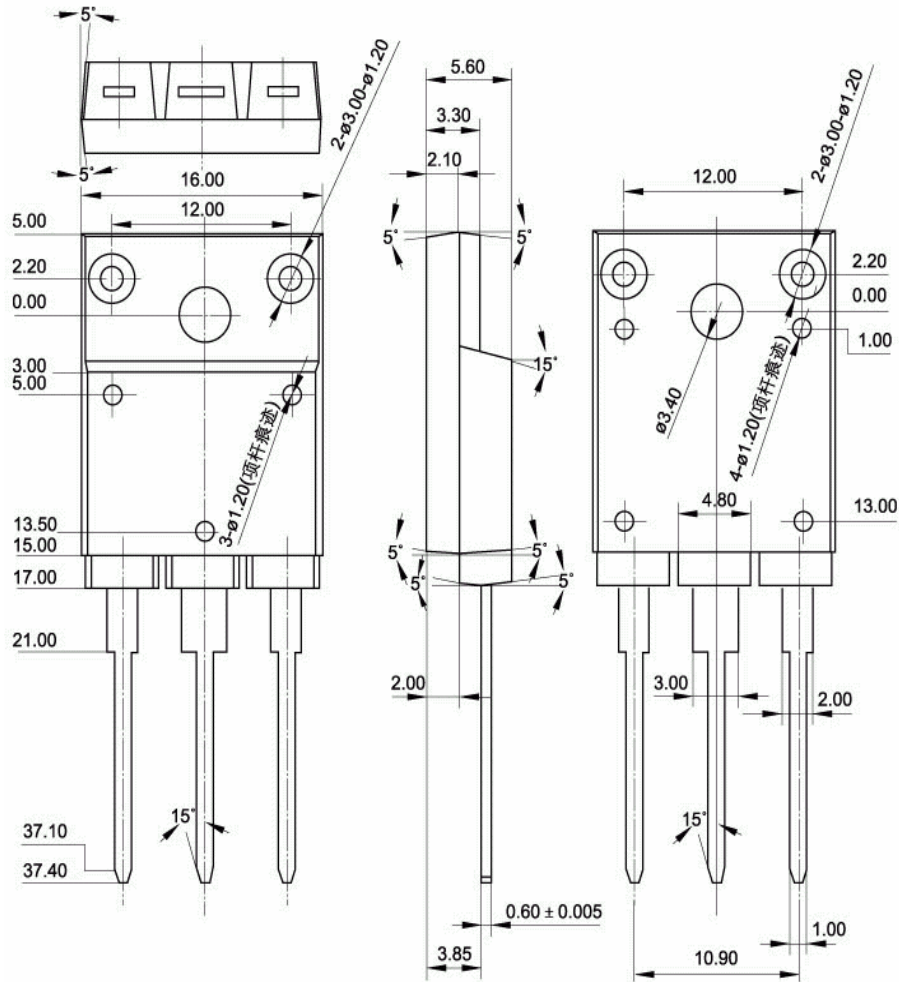


Fig.2 Outline dimensions