

Silicon NPN Power Transistors

2SD1650

DESCRIPTION

- With TO-3PML package
- Built-in damper diode
- High breakdown voltage
- High speed switching

APPLICATIONS

- For color TV horizontal output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

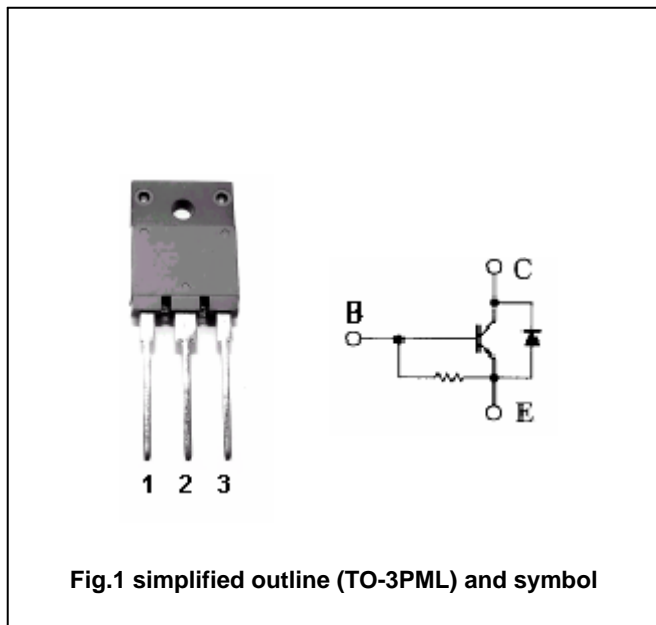


Fig.1 simplified outline (TO-3PML) and symbol

ABSOLUTE MAXIMUM RATINGS AT Tc=25

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

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(SUS)CEO}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	800			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2.5A ; I _B =0.8A		5.0	8.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2.5A ; I _B =0.8A			1.5	V
I _{CB0}	Collector cut-off current	V _{CB} =800V; I _E =0			10	μ A
I _{CES}	Collector cut-off current	V _{CE} =1500V; R _{BE} =			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0	40		130	mA
h _{FE}	DC current gain	I _C =0.5A ; V _{CE} =5V	8			
f _T	Transition frequency	I _C =0.5A ; V _{CE} =10V		3		MHz
V _F	Diode forward voltage	I _F =3.5A			2.0	V

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PACKAGE OUTLINE

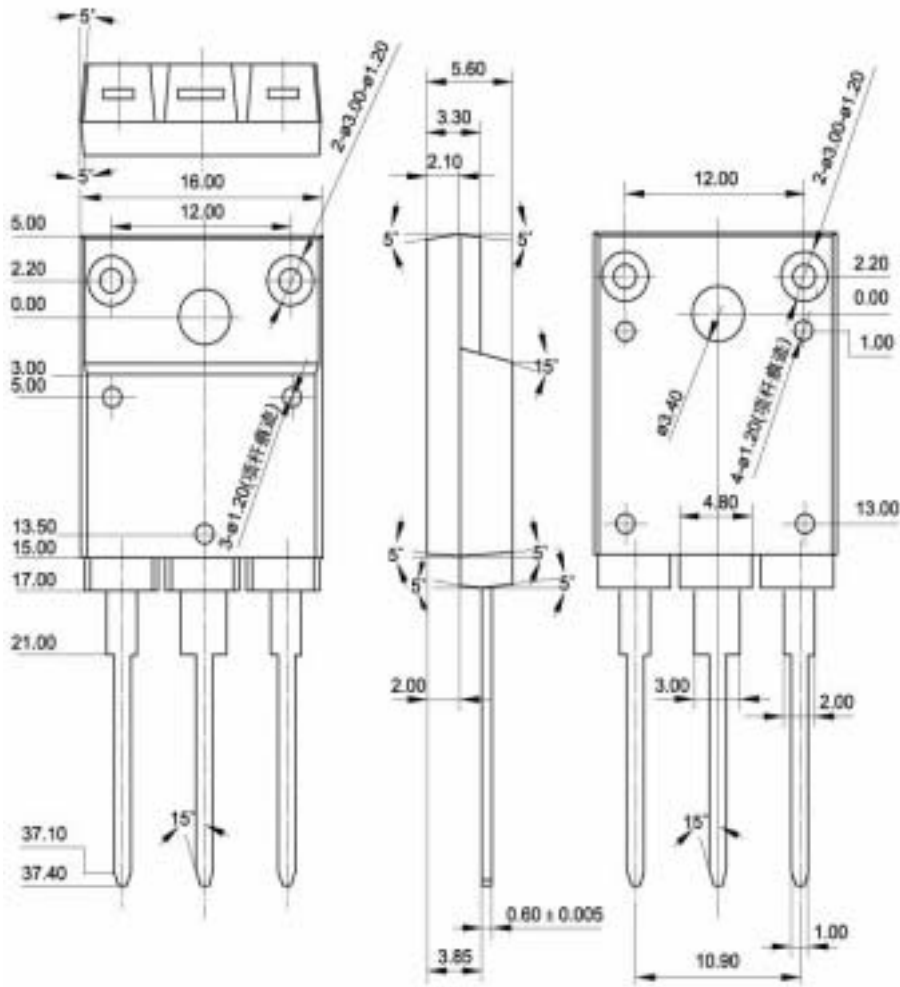


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)