

Silicon NPN Power Transistors

2SD1650

DESCRIPTION

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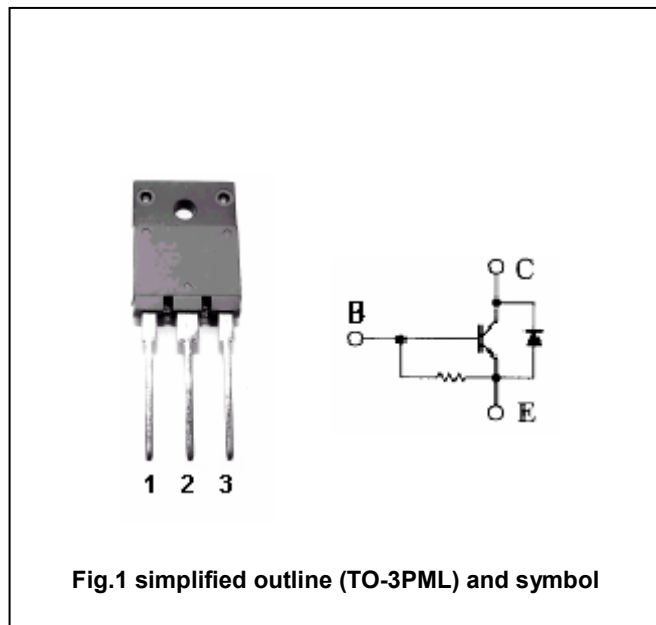
- With TO-3PML package
- Built-in damper diode
- High breakdown voltage
- High speed switching

APPLICATIONS

- For color TV horizontal output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

ABSOLUTE MAXIMUM RATINGS AT $T_c=25^\circ\text{C}$

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	$T_c=25^\circ\text{C}$	50	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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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_{CBO}	Collector cut-off current	$V_{CB}=800V$; $I_E=0$			10	μA
I_{CES}	Collector cut-off current	$V_{CES}=1500V$; $R_{BE}=\infty$			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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