

Silicon NPN Power Transistors

2SD2089

DESCRIPTION

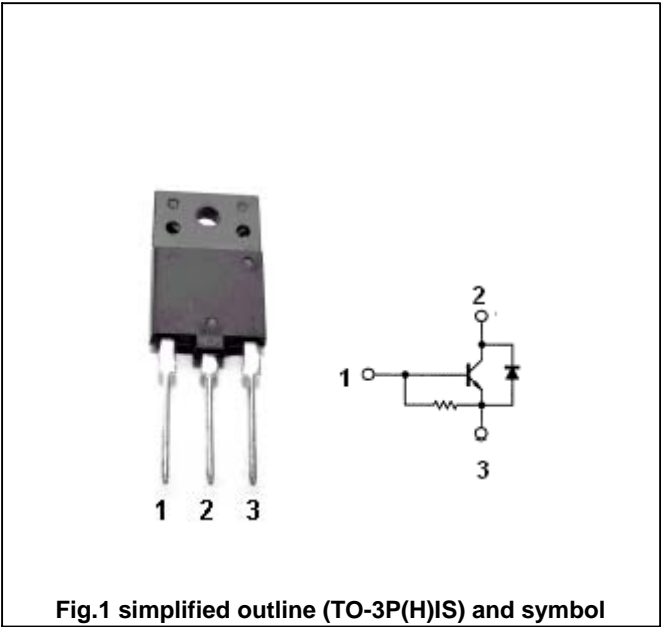
- With TO-3P(H)IS package
- Built-in damper diode
- High voltage ,high speed
- Low collector saturation voltage

APPLICATIONS

- Small screen color TV horizontal output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



ABSOLUTE MAXIMUM RATINGS AT Ta=25

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1500	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	600	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		3.5	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector power dissipation	Ta=25	3.5	W
		Tc=25	40	
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

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## CHARACTERISTICS

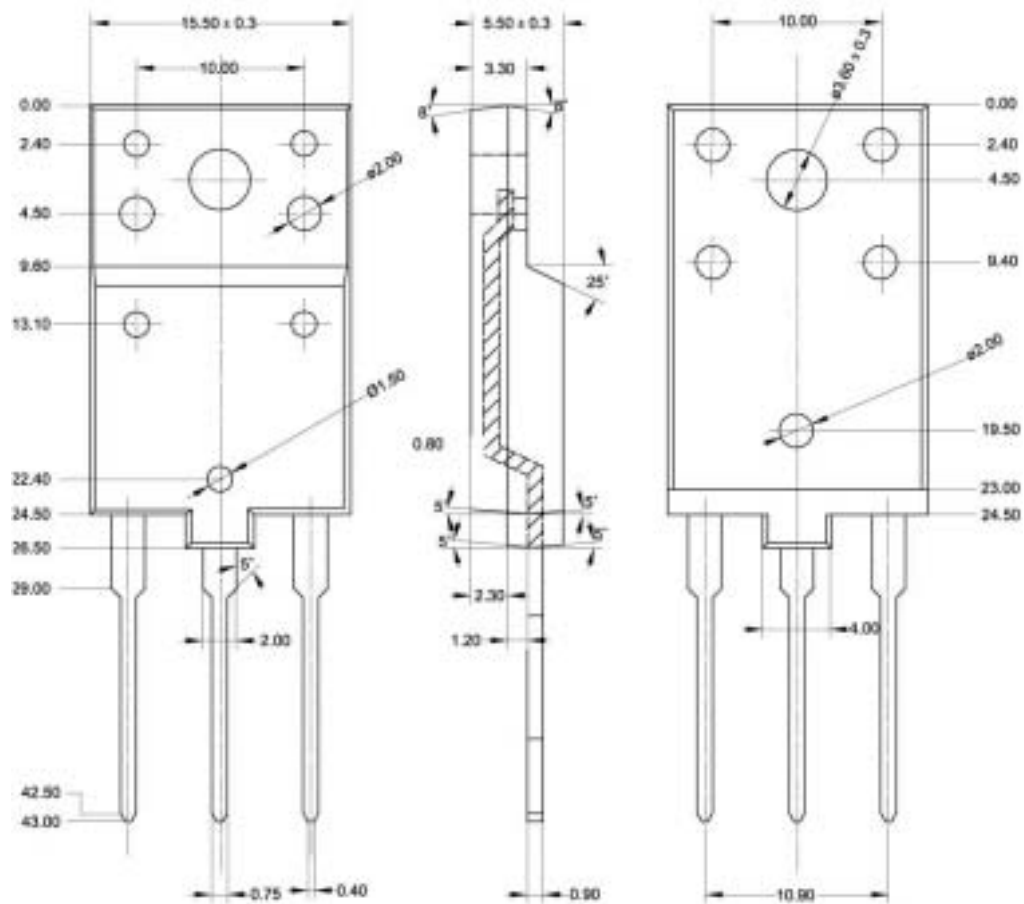
Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{EBO}$	Emitter-base breakdown voltage	$I_E=200mA$ , $I_C=0$	5			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=2.2A$ ; $I_B=0.7A$		0.3	1.0	V
$V_{BEsat}$	Emitter-base saturation voltage	$I_C=2.2A$ ; $I_B=0.7A$		0.85	1.0	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=500V$ ; $I_E=0$			10	$\mu A$
$h_{FE}$	DC current gain	$I_C=0.5A$ ; $V_{CE}=5V$	9		18	
$f_T$	Transition frequency	$I_C=0.1A$ ; $V_{CE}=10V$		3		MHz
$C_{OB}$	Collector output capacitance	$I_E=0$ ; $V_{CB}=10V$ ; $f=1MHz$		95		pF
$V_F$	Diode forward voltage	$I_F=2.2A$		1.2	1.5	V
$t_f$	Fall time	$I_{CP}=2.2A$ ; $I_{B1(end)}=0.7A$		0.2	0.5	$\mu s$

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## PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)