

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

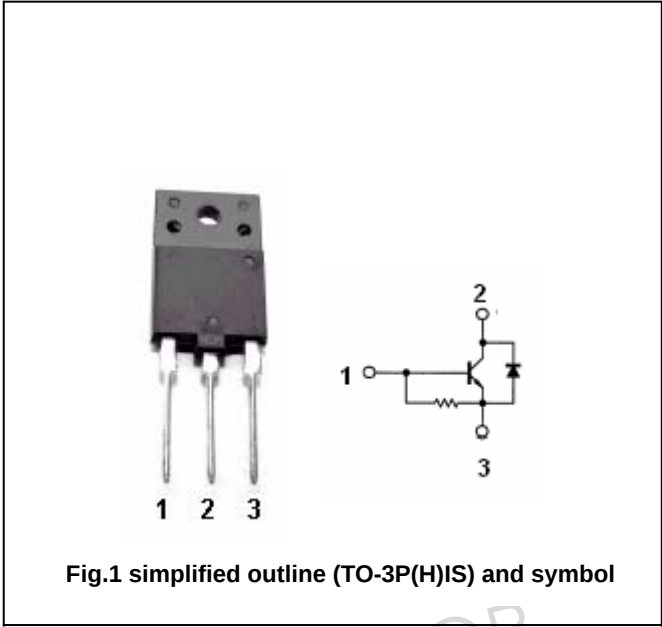


Fig.1 simplified outline (TO-3P(H)IS) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	600	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		3.5	A
I_B	Base current		1	A
P_C	Collector power dissipation	Ta=25	3.5	W
		Tc=25	40	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

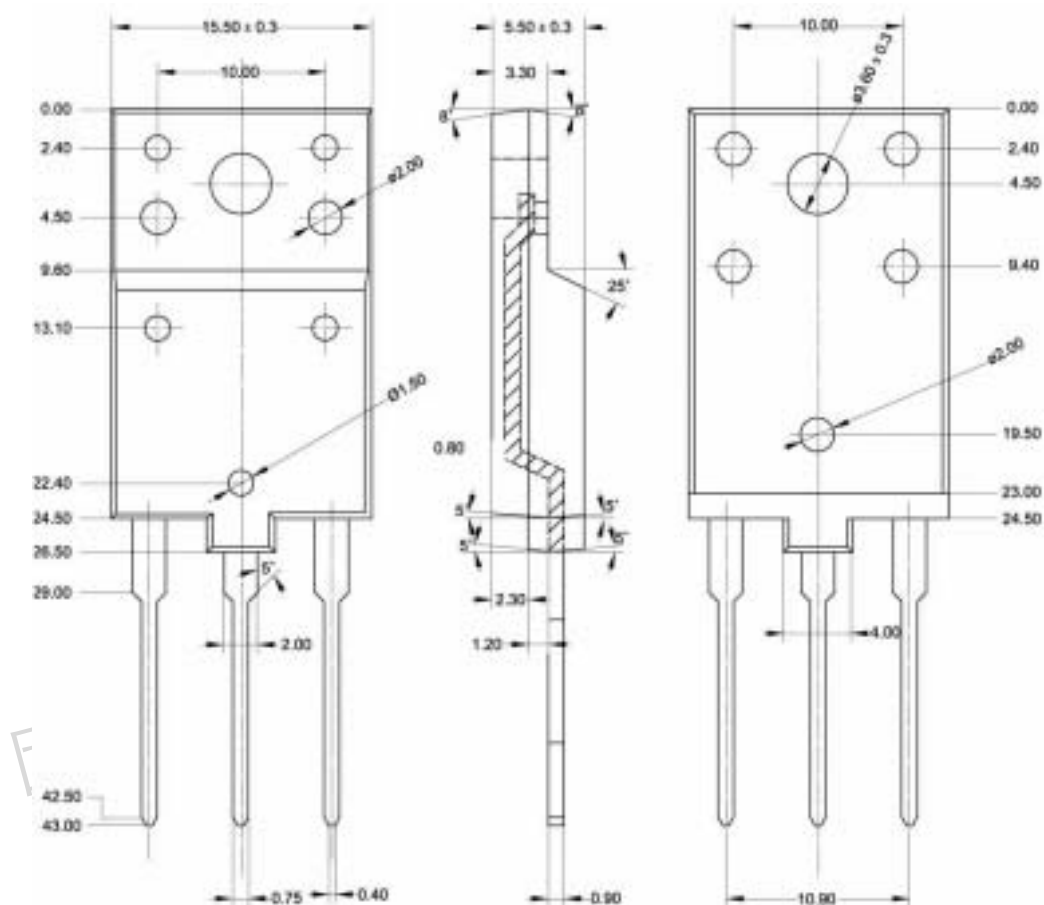
Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	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}	Base-emitter 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	μA
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	μs

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PACKAGE OUTLINE

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