

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistor

2SD1439

DESCRIPTION

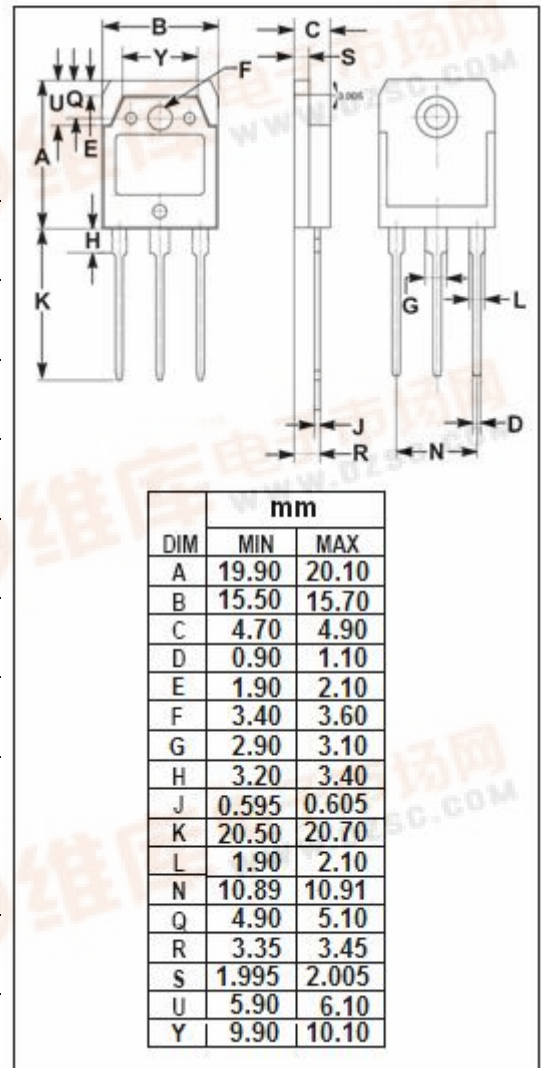
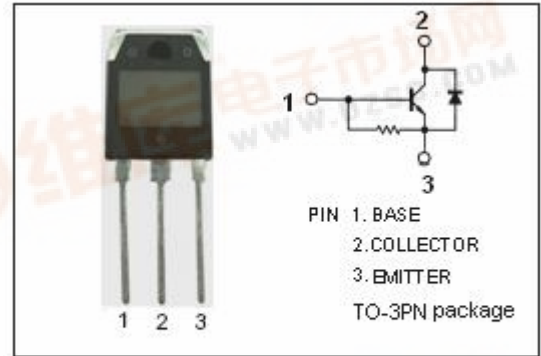
- High Voltage
- High Switching Speed
- Built-in damper diode
- Wide Area of Safe Operation

APPLICATIONS

- Designed for use in horizontal deflection circuits of colour TV receivers.

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	1500	V
V _{CES}	Collector-Emitter Voltage	1500	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current-Continuous	3	A
I _{CP}	Collector Current-Peak	10	A
I _{BP}	Base Current- Peak	3.5	A
P _C	Collector Power Dissipation @T _C =25°C	50	W
	Collector Power Dissipation @T _a =25°C	2.5	
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65-150	°C



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=500\text{mA}; I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.75\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.75\text{A}$			1.5	V
h_{FE}	DC Current Gain	$I_C=2\text{A}; V_{CE}=10\text{V}$	4		12	
I_{CBO}	Collector Cutoff Current	$V_{CB}=750\text{V}; I_E=0$			50	μA
		$V_{CB}=1500\text{V}; I_E=0$			1.0	mA
V_{ECF}	C-E Diode Forward Voltage	$I_F=2\text{A}$			2.2	V
f_T	Transition Frequency	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		2		MHz

Switching Times

t_s	Storage Time	$I_C=2\text{A}; I_B=0.75\text{A}; L_{leak}=5\mu\text{H}$			7	μs
t_f	Fall Time				0.75	μs