

isc Silicon NPN Power Transistors
KTD1351
DESCRIPTION

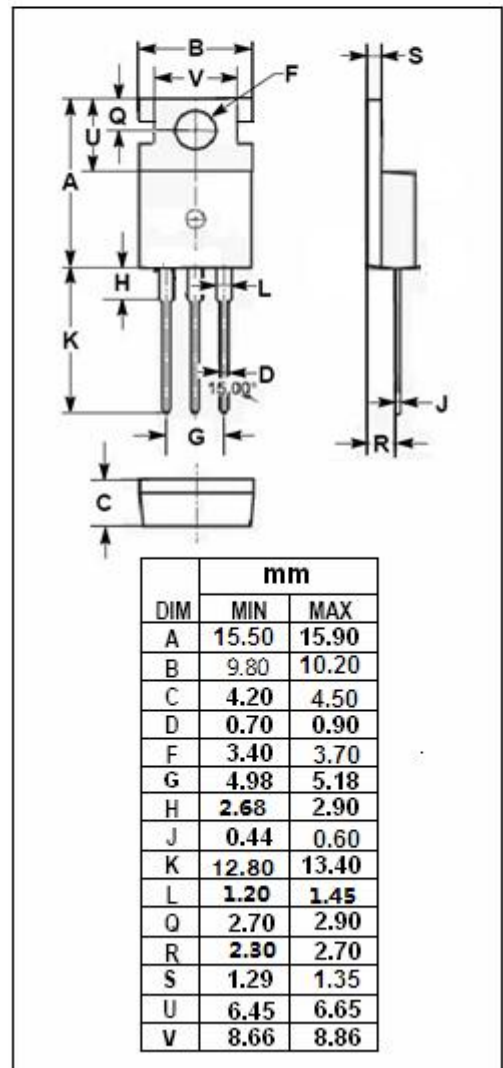
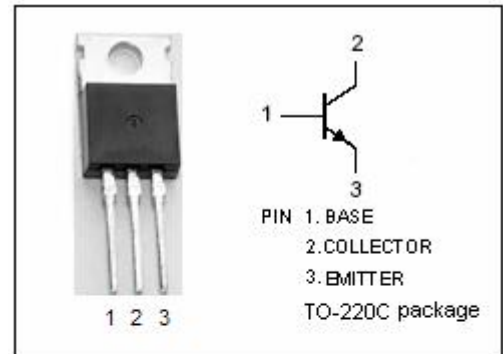
- Low Saturation Voltage-
: $V_{CE(sat)}=1.0V(\text{Max})@ (I_C= 2A, I_B=0.2A)$
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}= 60V(\text{Min})$
- Complement to Type KTB988
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for general purpose applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current	0.5	A
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	30	W
	Collector Power Dissipation $T_a=25^\circ\text{C}$	2.0	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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

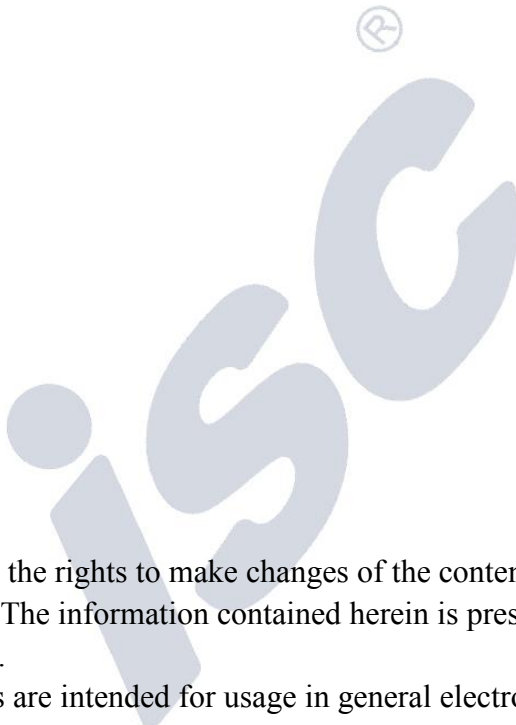
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=50\text{mA}; I_B=0$	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=0.5\text{A}; V_{CE}=5\text{V}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=60\text{V}; I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			100	μA
h_{FE}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	60		300	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}, f_{test}=1\text{MHz}$		35		pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=5\text{V}$		3.0		MHz

Switching times

t_{on}	Turn-on Time	$I_C=2.0\text{A}, I_{B1}=-I_{B2}=0.2\text{A}$		0.65		μs
t_{stg}	Storage Time			1.3		μs
t_f	Fall Time			0.65		μs

◆ h_{FE} Classifications

O	Y	GR
60-120	100-200	150-300

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