

Silicon NPN Power Transistor

KTD2059

DESCRIPTION

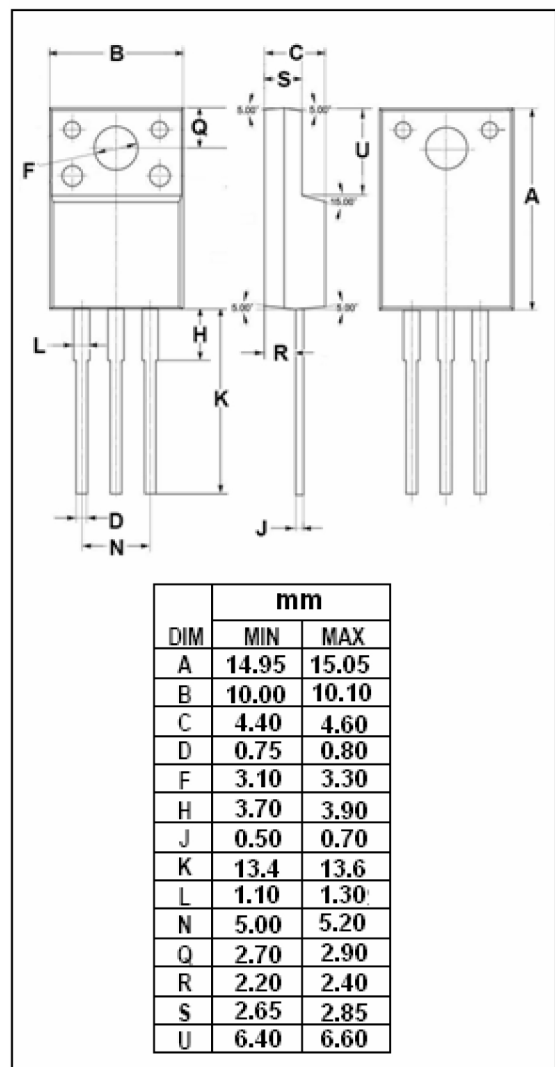
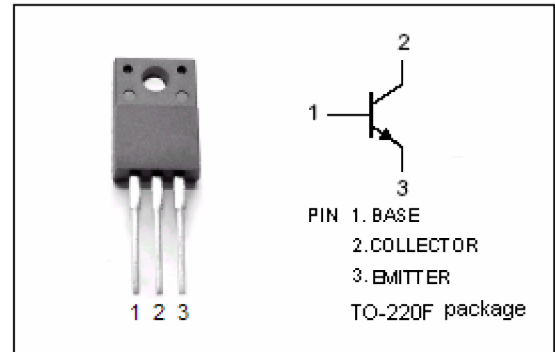
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 100V(\text{Min})$
- Collector Power Dissipation-
: $P_C = 30W @ T_C = 25^\circ\text{C}$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.0V(\text{Max}) @ (I_C = 4A, I_B = 0.4A)$
- Complement to Type KTB1367

APPLICATIONS

- Designed for general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C= 50\text{mA}; I_B= 0$	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 4\text{A}; I_B= 0.4\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 1\text{A}; V_{CE}= 5\text{V}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 100\text{V}; I_E= 0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			1	mA
h_{FE-1}	DC Current Gain	$I_C= 1\text{A}; V_{CE}= 5\text{V}$	40		240	
h_{FE-2}	DC Current Gain	$I_C= 4\text{A}; V_{CE}= 5\text{V}$	20			
C_{OB}	Output Capacitance	$I_E= 0; V_{CB}= 10\text{V}; f_{test}= 1\text{MHz}$		100		pF
f_T	Current-Gain—Bandwidth Product	$I_C= 1\text{A}; V_{CE}= 5\text{V}$		12		MHz

◆ h_{FE-1} Classifications

R	O	Y
40-80	70-140	120-240