

**isc Silicon NPN Darlington Power Transistor**

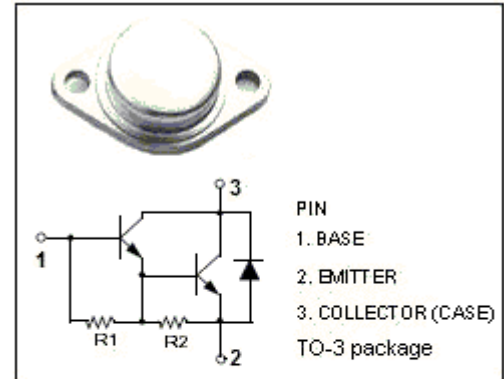
**PMD1602K**

**DESCRIPTION**

- High DC current gain
- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = 80V(\text{Min})$
- Complement to type PMD1702K

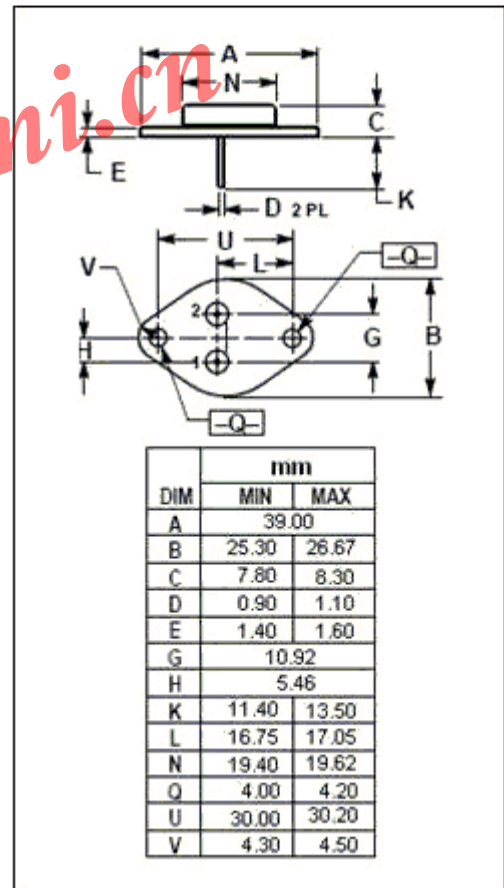
**APPLICATIONS**

- Designed for general purpose amplifier and low frequency switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current -Continuous	20	A
$I_{CP}$	Collector Current-Peak	40	A
$I_B$	Base Current	0.5	A
$P_C$	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	180	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~200	$^\circ\text{C}$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	ThermalResistance, Junction to Case	0.97	$^\circ\text{C/W}$

**isc Silicon NPN Darlington Power Transistor****PMD1602K****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=100\text{mA}; I_B=0$	80		V
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage	$I_C=100\text{mA}; R_{BE}=2.2\text{k}\Omega$	80		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=40\text{mA}$		2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=40\text{mA}$		2.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=10\text{A}; V_{CE}=3\text{V}$		2.8	V
$I_{CER}$	Collector Cutoff current	$V_{CE}=80\text{V}; R_{BE}=2.2\text{k}\Omega$		7.0	mA
$I_{EBO}$	Emitter Cut-off current	$V_{EB}=5\text{V}; I_C=0$		3.0	mA
$h_{FE}$	DC Current Gain	$I_C=10\text{A}; V_{CE}=3\text{V}$	750	20000	
$f_T$	Current-Gain—Bandwidth Product	$I_C=7\text{A}; V_{CE}=3\text{V}; f=1\text{kHz}$	4		MHz
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		400	pF