

**Silicon NPN Darlingtion Power Transistor**

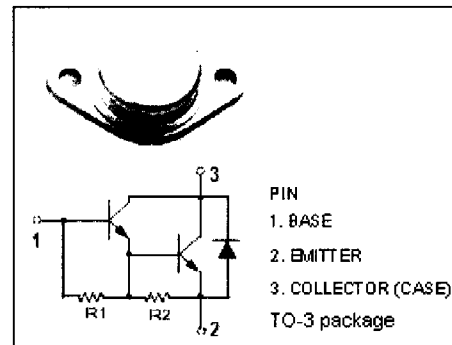
**PMD16K100**

**DESCRIPTION**

- High DC current gain
- Collector-Emitter Sustaining Voltage-  
 $V_{CEO(SUS)} = 100V(\text{Min})$
- Complement to type PMD17K100

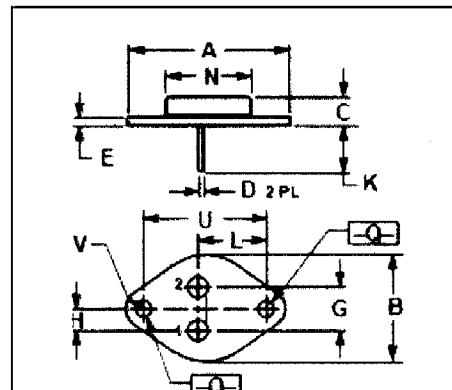
**APPLICATIONS**

- Designed for general purpose amplifier and low frequency switching applications



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

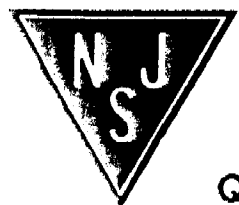
SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current -Continuous	20	A
$I_{CP}$	Collector Current-Peak	40	A
$I_B$	Base Current	0.5	A
$P_C$	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	200	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~200	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	ThermalResistance, Junction to Case	0.875	$^\circ\text{C/W}$



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# Silicon NPN Darlington Power Transistor

# PMD16K100

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	100		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	$V_{CE}=100\text{V}; R_{BE}=1\text{K}\Omega$ $V_{CE}=100\text{V}; R_{BE}=1\text{K}\Omega, T_C=150^\circ\text{C}$		1.0 5.0	mA
$I_{EBO}$	Emitter Cut-off current	$V_{EB}=5\text{V}; I_C=0$		2.0	mA
$h_{FE}$	DC Current Gain	$I_C=10\text{A}; V_{CE}=3\text{V}$	1000	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