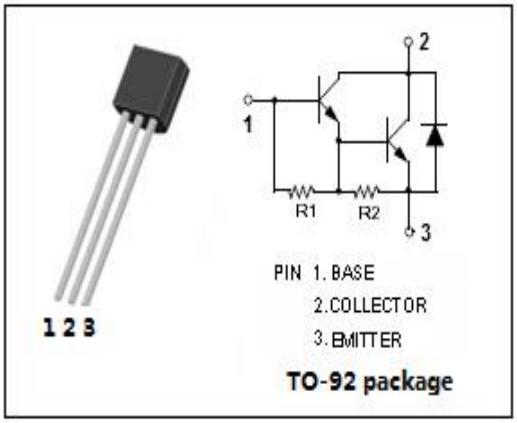
isc Silicon NPN Darlington Power Transistor MPSA14

DESCRIPTION

- With TO-92 packaging
- Very high DC current gain
- Monolithic darlington transistor with integrated antiparallel collector-emitter diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

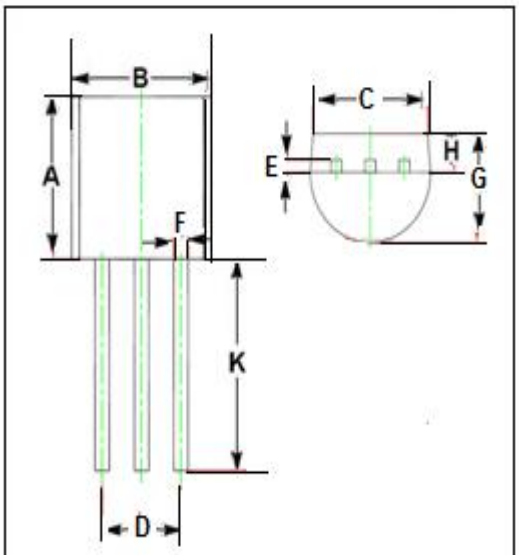
- AC-DC motor control
- Electronic ignition
- Alternator regulator

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	0.5	A
I_{CM}	Collector Current-Peak	1.0	A
P_T	Total Power Dissipation	1.5	W
T_j	Max.Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	83.3	℃/W



DIM	mm MIN	mm MAX
A	4.30	4.70
B	4.30	4.70
C	3.43	
D	2.44	2.64
E	0.36	0.51
F	0.38	0.55
G	3.30	3.70
H	1.10	1.40
K	14.10	14.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 1mA, I_B= 0	30		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=0.1A ,I_B= 0.1mA		1.5	V
$V_{BE(on)}$	Base-Emitter on Voltage	I_C=0.1A ,V_{CE}=5V		2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}=30V, I_E= 0		0.1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 10V; I_C= 0		0.1	μA
h_{FE-1}	DC Current Gain	I_C= 10mA ; V_{CE}= 5V	10000		
h_{FE-2}	DC Current Gain	I_C= 0.1A ; V_{CE}= 5V	20000		