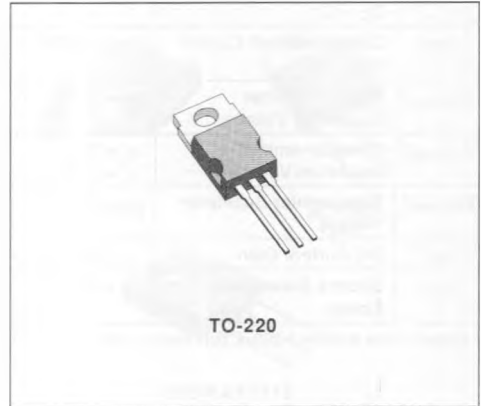
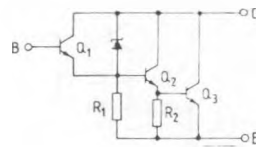


## NPN HIGH VOLTAGE DARLINGTON

- VERY HIGH GAIN
- HIGH VOLTAGE
- HIGH RUGGEDNESS BY INTEGRATED HIGH VOLTAGE ZENER
- AUTOMOTIVE FUNCTIONAL TEST



### INTERNAL SCHEMATIC DIAGRAM



### DESCRIPTION

NPN multi-epitaxial planar integrated trivalent in TO-220 plastic package, intended for use in high performance electronic ignition or inductive switching circuit.

### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CE0}$	Collector-emitter Voltage ( $I_B = 0$ )	400	V
$V_{EBO}$	Emitter-base Voltage ( $I_C = 0$ )	8	V
$I_C$	Collector Current	5	A
$I_{CM}$	Collector Peak Current	8	A
$I_B$	Base Current	1	A
$P_{Tot}$	Total Dissipation at $T_c < 25^\circ\text{C}$	50	W
$T_{stg}$	Storage Temperature	- 55 to 150	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$

## THERMAL DATA

$R_{thj, case}$	Thermal Resistance Junction-case	max	2.5	$^{\circ}\text{C/W}$
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ELECTRICAL CHARACTERISTICS ( $T_{case} = 25^{\circ}\text{C}$  unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
$I_{EBO}$	Emitter Cutoff Current ( $I_C = 0$ )	$V_{EB} = 8\text{V}$				100	$\mu\text{A}$
$I_{CES}$	Collector Cutoff Current ( $V_{BE} = 0$ )	$V_{CE} = 400\text{V}$				100	$\mu\text{A}$
$V_{CE0(sus)}^*$	Collector-emitter Sustaining Voltage	$I_C = 50\text{mA}$		400			V
$V_{CE(sat)}^*$	Collector-emitter saturation Voltage	$I_C = 3\text{A}$	$I_B = 3\text{mA}$			4	V
		$I_C = 2.5\text{A}$	$I_B = 1\text{mA}$			4	V
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = 3\text{A}$	$I_B = 3\text{mA}$			3.5	V
$h_{FE}^*$	DC Current Gain	$I_C = 1\text{A}$	$V_{CE} = 5\text{V}$	7000			
$E_{s/b}$	Second Breakdown Energy	$I_C = 4\text{A}$	$L = 10\text{mH}$	80			mJ

\* Pulsed : pulse duration = 300 $\mu\text{s}$ , duty cycle = 1.5%.