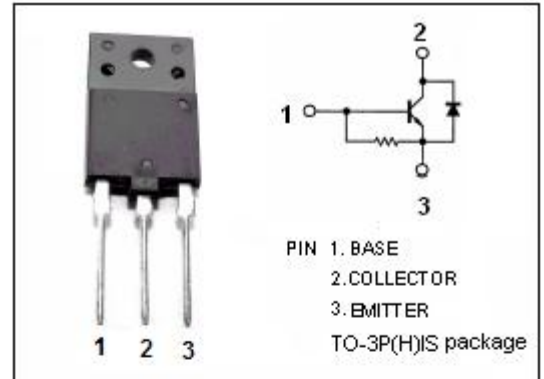


**isc Silicon NPN Power Transistor**
**MD1803DFX**
**DESCRIPTION**

- High Voltage
- Low base-drive requirements
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 700V$  (Min)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

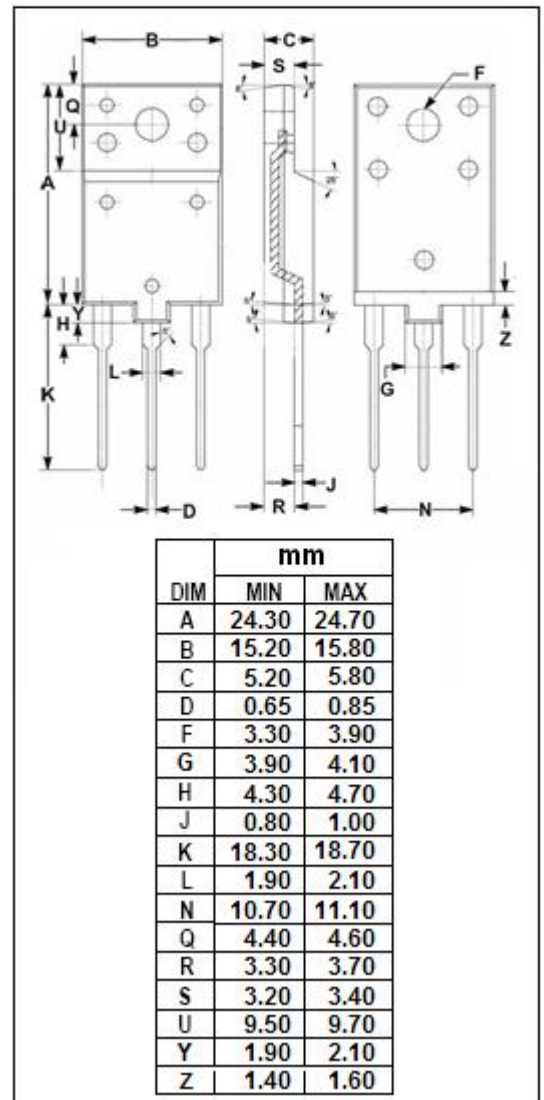
- Horizontal deflection output for TV


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	700	V
$V_{EBO}$	Emitter-Base Voltage	10	V
$I_C$	Collector Current- Continuous	10	A
$I_{CM}$	Collector peak current ( $t_p < 5ms$ )	15	A
$I_B$	Base Current- Continuous	5	A
$P_{TOT}$	Total dissipation at $T_c=25^\circ C$	57	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	2.2	$^\circ C/W$



## isc Silicon NPN Power Transistor

## MD1803DFX

## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Collector-base breakdown Voltage	I <sub>c</sub> = 200mA; I <sub>e</sub> = 0	10			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>c</sub> = 5.0A; I <sub>B</sub> =1.25A			2	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>c</sub> = 5.0A; I <sub>B</sub> =1.25A			1.2	V
I <sub>CB0</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1500V ; I <sub>E</sub> = 0 V <sub>CB</sub> = 1500V ; I <sub>E</sub> = 0 , TC=125			0.2 2	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V ; I <sub>C</sub> = 0	40		120	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V		18		
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 5A ; V <sub>CE</sub> = 1V		5		
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = 5A ; V <sub>CE</sub> = 5V	5.5			

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