

XI'AN IR-PERI

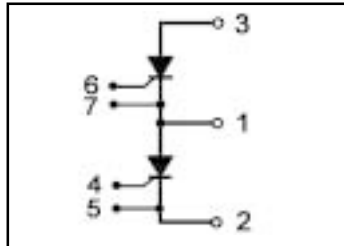


PRELIMINARY

MTC25TA120/180

Thyristor Modules Add -A -PAK
Features

- International standard package
With DBC ceramic base plate
- Planar passivated chips
- High surge capability
- UL recognition pending



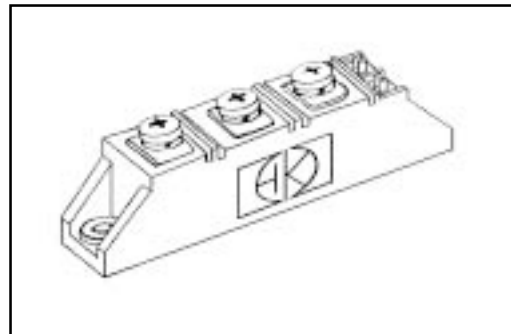
VRRM =1200V- 1800V
IFAVM =2x25A
IFRMS=2x40A

Benefits

- DC motor control
- Simple AC motor controller
- Light, heat and temperature control

Voltage Ratings

| Voltage Code | VRRM(V) | VRSM(V) | IRRM T _J =25 °C(mA) |
|--------------|---------|---------|--------------------------------|
| | VDRM(V) | VDSM(V) | IDRM T _J =25 °C(mA) |
| 120 | 1200 | 1300 | 1.0 |
| 140 | 1400 | 1500 | 1.0 |
| 160 | 1600 | 1700 | 1.0 |
| 180 | 1800 | 1900 | 1.0 |



Absolute Maximum Ratings

| Symbol | Test Conditions | Max. | Units | |
|-------------------|--|-------------------------------------|------------------|------|
| IFRMS | T _{VJM} =125 °C | 40 | A | |
| IFAVM | T _c =60 °C;180° sine | 25 | A | |
| | T _c =85 °C;180° sine | 18 | A | |
| IFSM | T _{VJ} =45 °C; t=10ms (50 Hz),sine | 400 | A | |
| | V _R =0 t=8.3ms (60 Hz),sine | 420 | A | |
| | T _{VJ} =125 °C; t=10ms (50 Hz),sine | 350 | A | |
| | V _R =0 t=8.3ms (60 Hz),sine | 370 | A | |
| I ² t | T _{VJ} =45 °C; t=10ms (50 Hz),sine | 800 | A ² s | |
| | V _R =0 t=8.3ms (60 Hz),sine | 730 | A ² s | |
| | T _{VJ} =125 °C; t=10ms (50 Hz),sine | 600 | A ² s | |
| | V _R =0 t=8.3ms (60 Hz),sine | 570 | A ² s | |
| di/dt | f=50Hz, t _p =200µs, V _D =2/3V _{DRM} I _G =0.45A, di _G /dt=0.45A/µs, T _{VJ} =T _{VJM} | repetitive, I _T =45A | 150 | A/µs |
| | | non repetitive, I _T =45A | 500 | A/µs |
| dv/dt | T _{VJ} =T _{VJM} ; V _D =2/3V _{DRM} (linear voltage rise) | 1000 | V/µs | |
| V _{ISOL} | RMS Isolation Voltage, Any Terminal To Case, t=1 min | 2500 | V | |
| T _{VJ} | | -40 to +125 | °C | |
| T _{VJM} | | 125 | | |
| T _{STG} | | -40 to +125 | | |

Thermal / Mechanical Characteristics

| | Parameter | Typ. | Max. | Units |
|------------------|--|------|------|-------|
| R _{θJS} | Thermal Resistance, Junction-to- Sink DC | - | 1.5 | |
| R _{θJC} | Thermal Resistance, Junction-to- Case DC | - | 1.3 | °C/W |
| | Mouting Torque, Case-to-Heatsink | - | 4.0 | N.m |
| | Mouting Torque, Case-to-Terminal 1,2 & 3 | - | 3.0 | |
| | Weight of Module | 100 | - | g |

Electrical Characteristics (unless otherwise specified)

| | Test Conditions | Min. | Typ. | Max. | Units |
|-------------------------------------|---|------|------|------|-------|
| I _{RRM} , I _{DRM} | T _{VJ} =T _{VJM} ; V _R =V _{RRM} ; V _D =V _{DRM} | - | - | 5 | mA |
| V _T | I _T =60A; T _{VJ} =25 °C | - | - | 1.41 | V |
| V _{TO} | For power-loss calculations only (T _{VJ} =125 °C) | - | - | 0.85 | V |
| r _T | | - | - | 18 | mΩ |
| V _{GT} | V _D =6V; T _{VJ} =25 °C | - | - | 1.5 | V |
| I _{GT} | V _D =6V; T _{VJ} =25 °C | - | - | 100 | mA |
| V _{GD} | T _{VJ} =T _{VJM} ; V _D =2/3V _{DRM} | - | - | 0.2 | V |
| I _{GD} | | - | - | 10 | mA |
| I _L | T _{VJ} =25 °C; t _p =10 μs; V _D =6V; I _G =0.45A; di _G /dt=0.45A/μs | - | - | 450 | mA |
| I _H | T _{VJ} =25 °C; V _D =6V | - | - | 200 | mA |
| t _{gd} | T _{VJ} =25 °C; V _D =1/2V _{DRM} ; I _G =0.45A; di _G /dt=0.45A/μs | - | - | 2 | μs |
| t _q | T _{VJ} =T _{VJM} ; I _T =20A, t _p =200 μs; -di/dt=10A/ μs V _R =100V; dv/dt=20V/ μs; V _D =2/3V _{DRM} | - | 150 | - | μs |
| Q _s | T _{VJ} =125 °C; I _T =25A, -di/dt=0.64A/ μs | - | - | 50 | μC |
| I _{RM} | | - | - | 6 | A |

Case Outline - a-a-pak

