

# SMT Gate Drive Transformer

1500Vdc Basic and Operational Insulation



- ⊗ 1500 V<sub>DC</sub> isolation between Gate and Drive
- ⊗ Basic Insulation (1.4mm creepage/clear-ance) and operational available
- ⊗ Part designed for rugged environments
- ⊗ Construction techniques assure excellent resistance to vibration and shock
- ⊗ Operating frequency: 50kHz and up
- ⊗ Moisture Sensitivity Level : 3

## Electrical Specifications @ 25 °C – Operating Temperature – 55 °C to +130 °C

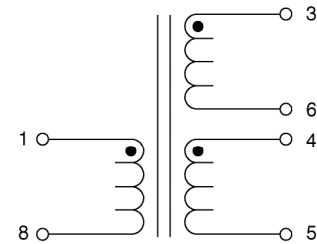
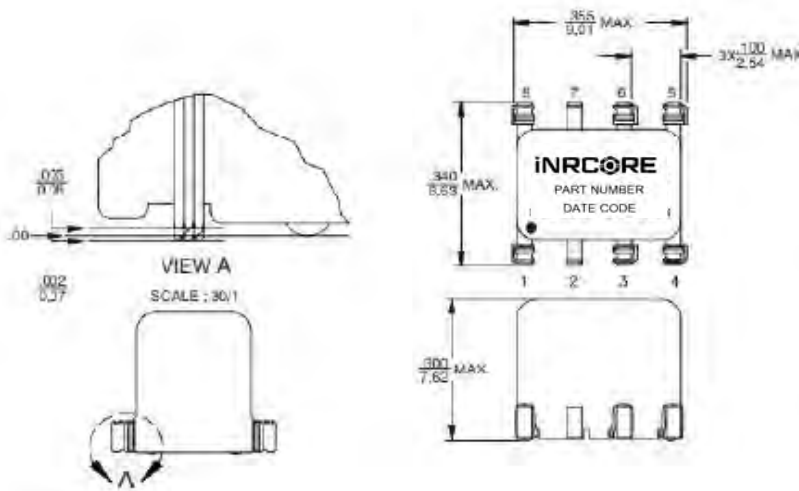
| Part Number | Turns Ratio | Pri-Sec Isolation (V <sub>DC</sub> ) | MAX <sup>1</sup> V* $\mu$ sec | Primary Inductance (mH MIN) | Leakage <sup>2</sup> Inductance ( $\mu$ H MAX) | DCR Primary ( $\Omega$ MAX) | DCR Secondary ( $\Omega$ MAX) | Package Size (L x W x H) mm MAX) |
|-------------|-------------|--------------------------------------|-------------------------------|-----------------------------|--|-----------------------------|-------------------------------|----------------------------------|
| X-1569      | 1:1:1       | 1500                                 | 45.1                          | 3.3                         | 0.700  | 1.6                         | 1.6                           | 9.0 x 8.6 x 7.6                  |

- NOTES: 1. The maximum volt-sec rating limits the flux density to 2200 Gauss when used in a unipolar drive application. For bi-polar drive applications a maximum volt-sec of two time this rating is acceptable. (2\*(volt\* $\mu$ sec ratio))
2. Leakage Inductance is measured at the primary terminals with all secondaries shorted.
3. Add suffix "T" to part number for Tape & Reel package.
4. To order a RoHS compliant part, add the suffix "NL" to the part number, i.e. X-1569 becomes X-1569NL.

## Mechanical

## Electrical Schematic

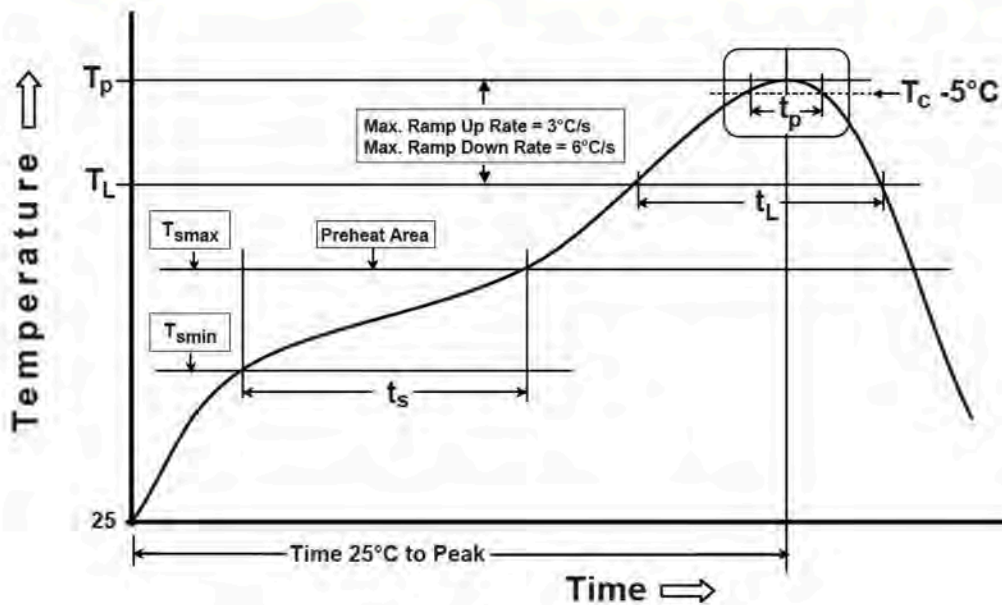
X-1569



Part hardened for aerospace use.



## Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



| $T_{SMIN}$<br>(°C) | $T_{SMAX}$<br>(°C) | $T_L$<br>(°C) | $T_P$<br>(°C MAX) | $t_s$<br>(s) | $t_L$<br>(s) | $t_p$<br>(s MAX) | Ramp-up rate<br>( $T_L$ to $T_P$ ) | Ramp-down rate<br>( $T_P$ to $T_L$ ) | Time<br>25°C to peak temperature<br>(s MAX) |
|--------------------|--------------------|---------------|-------------------|--------------|--------------|------------------|------------------------------------|--------------------------------------|---|
| 100                | 150                | 183           | 235               | 60-120       | 60-150       | 20               | 3°C/s MAX                          | 6°C/s MAX                            | 360   |

Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

### For More Information

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