

# SEMITRANS™ 2N

## Ultra Fast IGBT Module

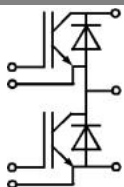
SKM 100GB125DN

### Features

- High efficiency (typ. 98%)
- Low switching losses (typ. 1.5 ns)
- High current density (typ. 100 A/cm²)
- High thermal conductivity (typ. 1.5 W/cm²K)
- High reliability (typ. 100,000 hours)
- Low EMI (typ. 100 dB)
- High dv/dt (typ. 100 V/ns)
- High di/dt (typ. 100 A/ns)
- High temperature range (typ. -40°C to 150°C)
- High power density (typ. 100 W/cm²)
- High efficiency (typ. 98%)
- Low switching losses (typ. 1.5 ns)
- High current density (typ. 100 A/cm²)
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- High di/dt (typ. 100 A/ns)
- High temperature range (typ. -40°C to 150°C)
- High power density (typ. 100 W/cm²)

### Typical Applications

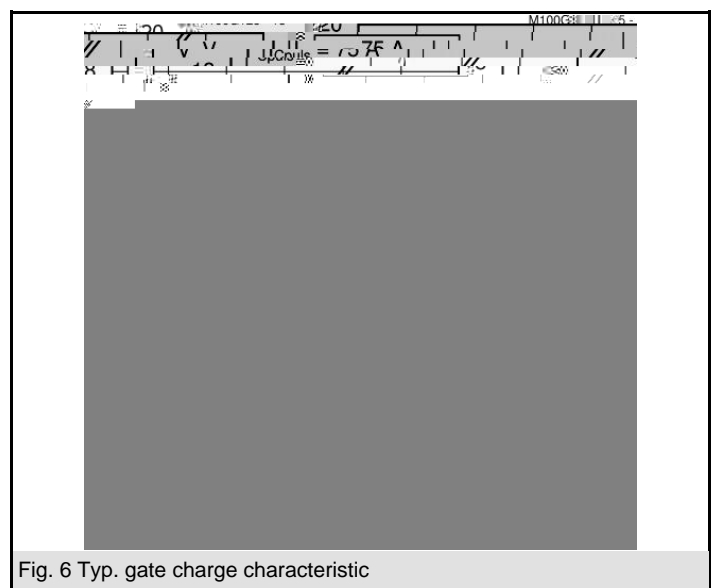
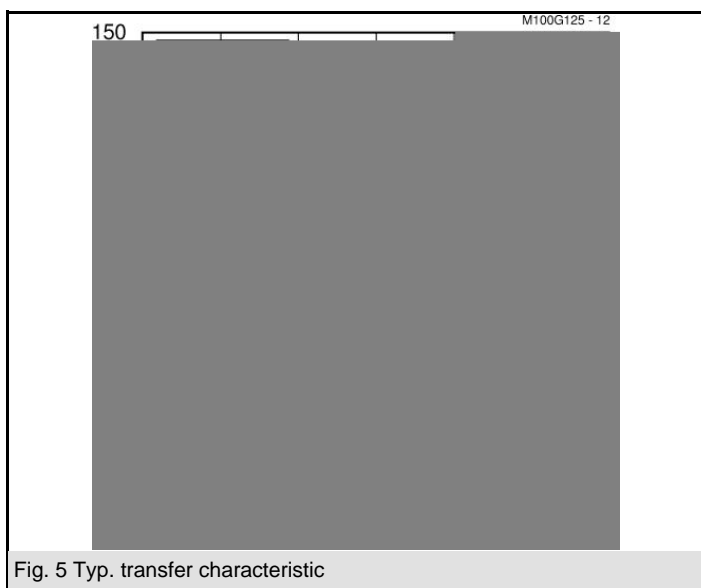
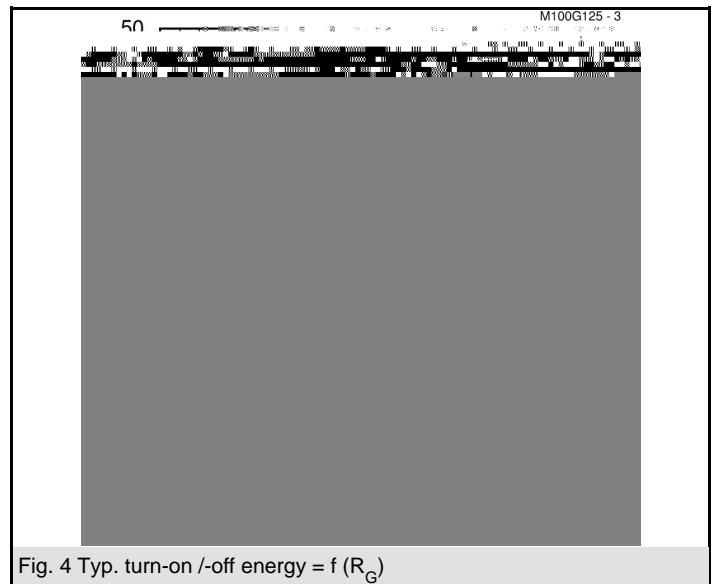
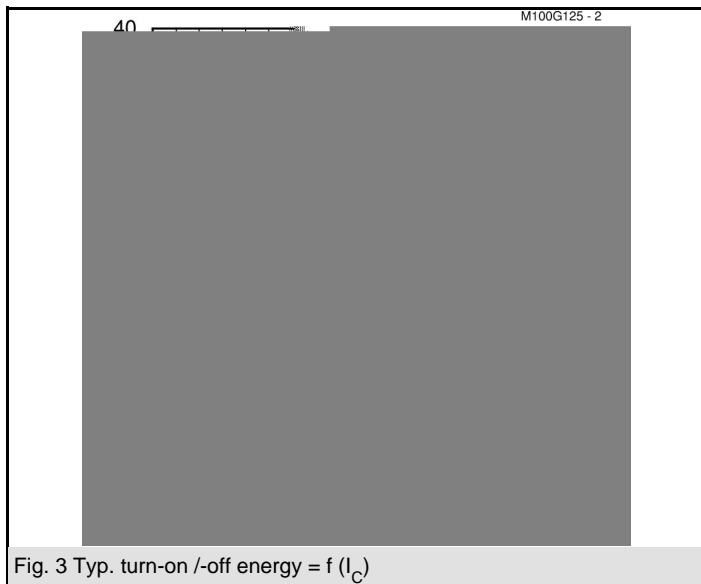
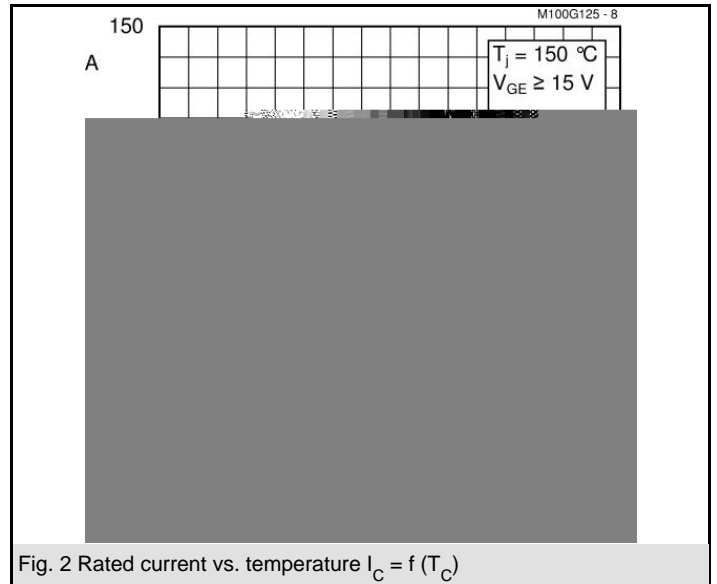
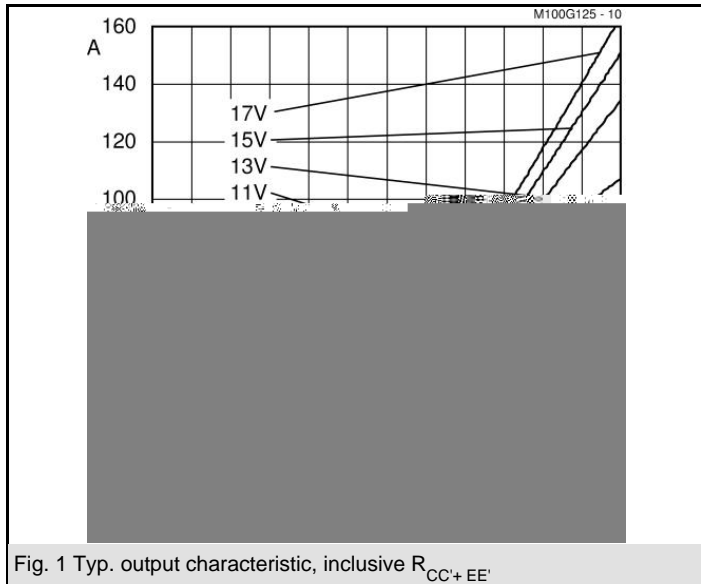
- Inverter for motor drives
- Switching power supply
- High power LED driver
- High speed switching
- High power amplifier
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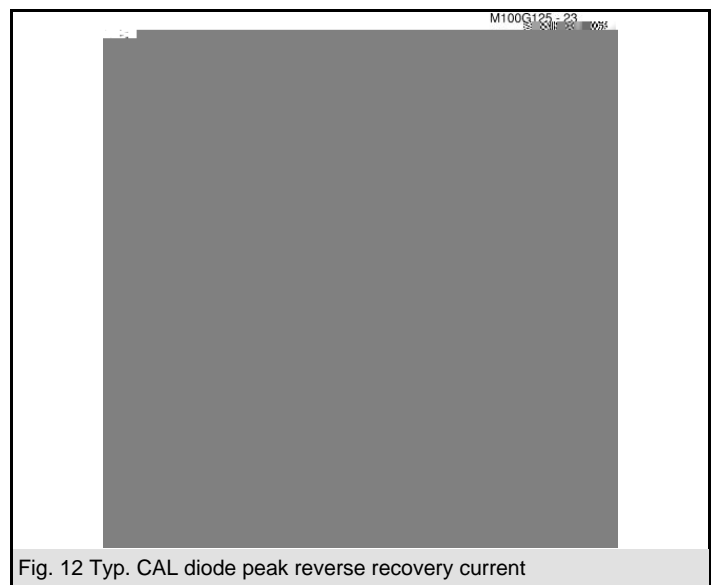
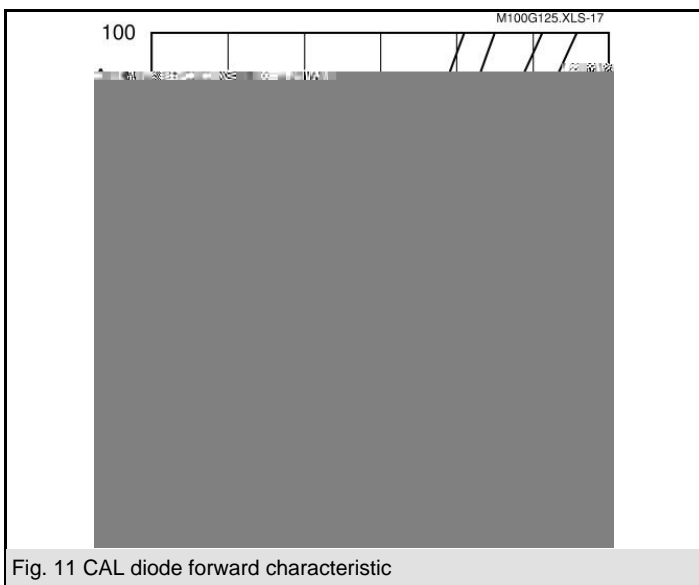
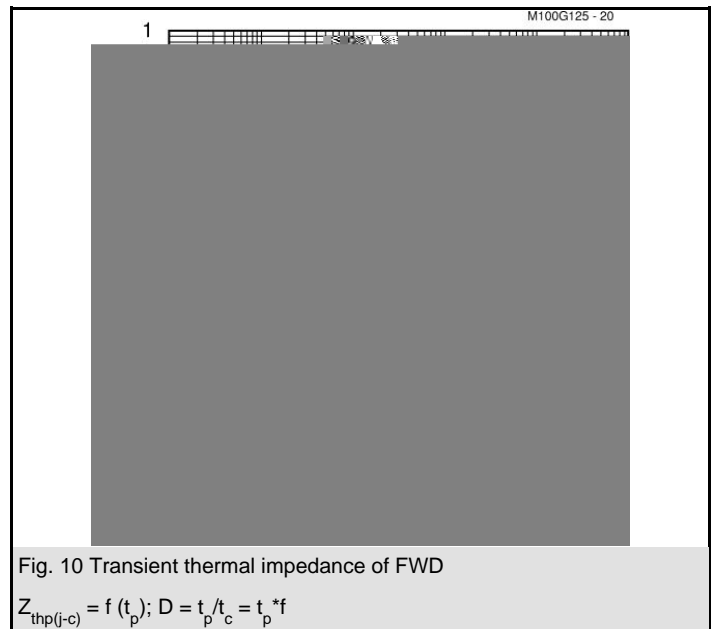
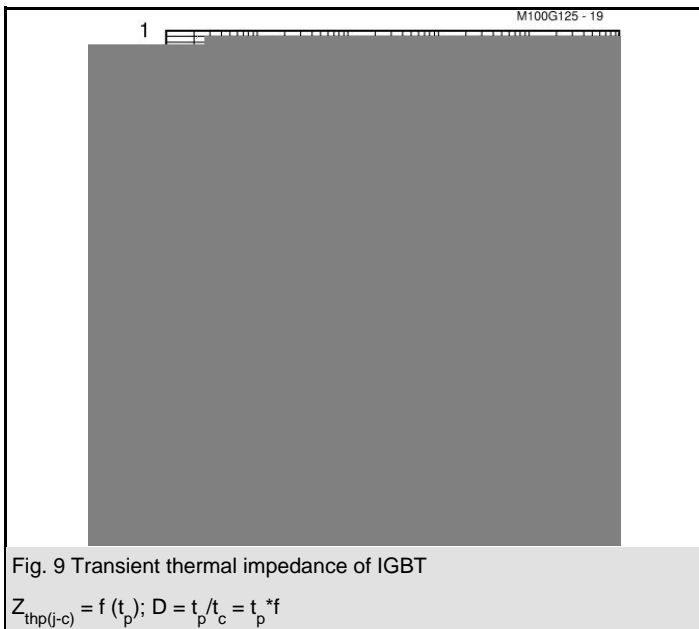
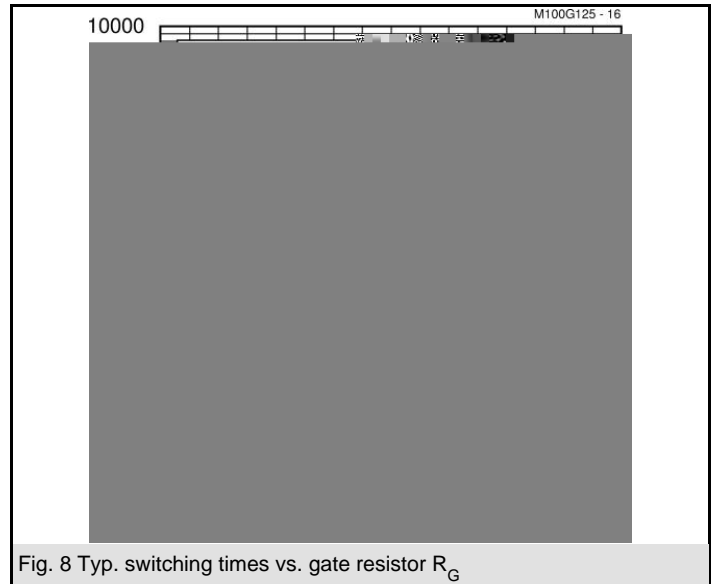
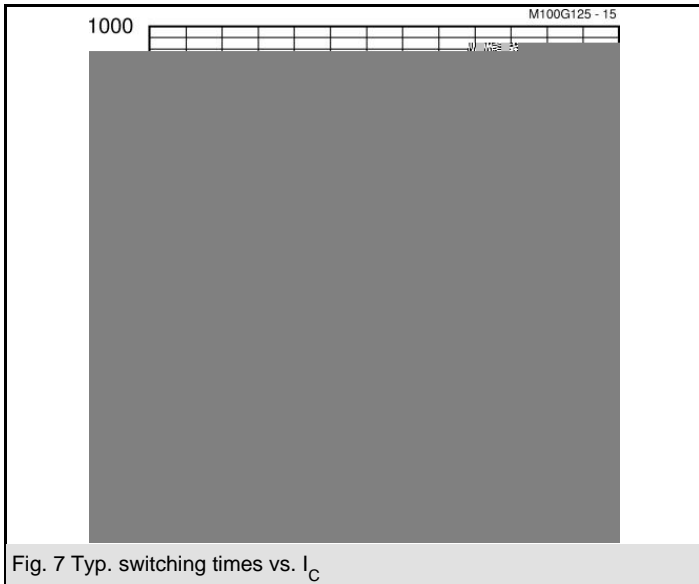


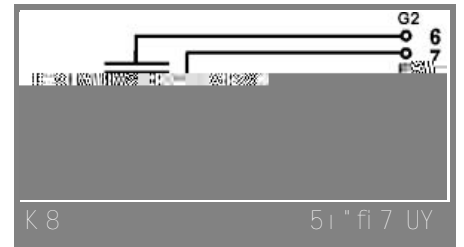
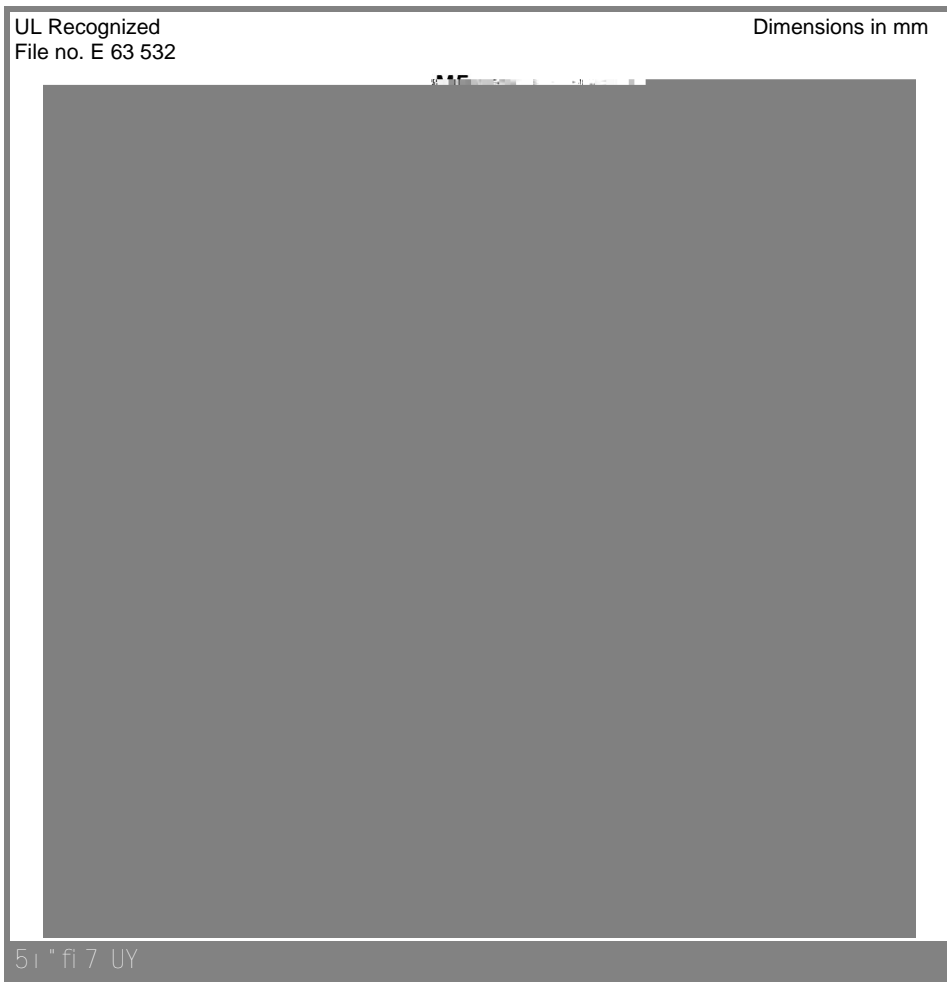
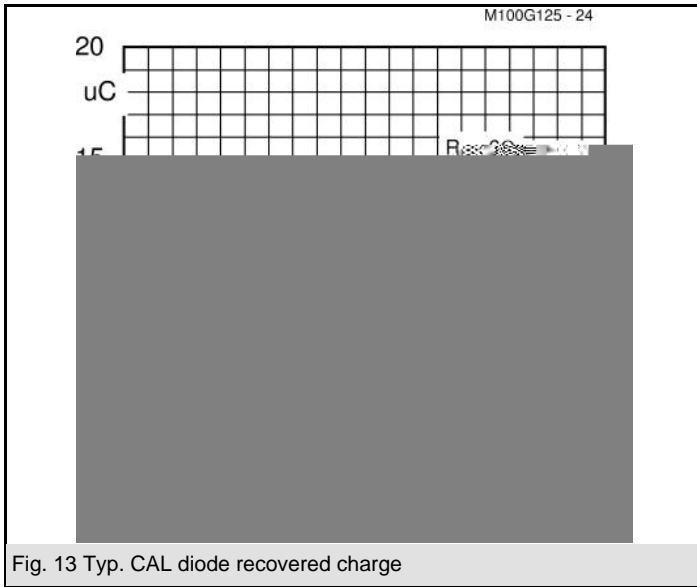
GB

Absolute Maximum Ratings		9. D > E F5 L / fff " " ( " fi ) & \$ fi " * fi , \$ \$ i'	
Symbol	Conditions	Values	Units
<b>IGBT</b>			
$G_{5C\#}$		$I_{>><<}$	G
$I_{5}$	$9. D > E : I E = F5$	$I_{<< : I < =}$	6
$I_{5BJ}$	$( " D : Z "$	$I : E <$	6
$G_{KC\#}$		$L >>$	G
$9_{4M} : 9_{\cdot} \varrho =$	$9_{NOCB69TN} - P 9_{\cdot} \varrho$	$QR < S S T ; E < : ; > E =$	F5
$G_{\$ i fi}$	$65 L : Z \$ S$	$R <<<$	G
<b>Inverse diode</b>			
$I_{2}$	$9. D > E : I < = F5$	$UE : / E =$	6
$I_{2BJ}$	$( " D : Z "$	$I : E <$	6
$I_{2\#J}$	$( " D : < Z " V " \$ S / 9_{M} D : E < F5$	$V <<$	6

Characteristics		9. D > E F5 L / fff " " ( " fi ) & \$ fi " * fi , \$ \$ i'			
Symbol	Conditions	min.	typ.	max.	Units
<b>IGBT</b>					
$G_{KC} : (=$	$G_{KC} D G_{5C} L_{5} D > Z 6$	R/E	E/E	/E	G
$I_{5C\#}$	$G_{KC} D < L G_{5C} D G_{5C\#} L 9_{M} D > E : ; > E = F5$		$< L E$	$< L R E$	Z 6
$G_{5C} : 9_{N} =$	$9_{M} D > E : ; > E = F5$				G
$I_{5C}$	$G_{KC} D : E G L 9_{M} D > E : ; > E = F5$				Z X
$G_{5C} : i (=$	$I_{5/12} D V E 6 L G_{KC} D : E G L , " \$ f f i 4 f i f i$		Y/E	Y/E	G
$I_{5i}$	$I / ' fi ) : f f i \& \$ Z , I / ' \$ \$ / "$		E	/E	/2
$I_{5i fi}$	$G_{KC} D < L G_{5C} D > E G L : D : J + A$		$< L V >$	$< L U$	/2
$I_{5i fi}$			$< L Y$	$< L E$	/2
$\%_{5C}$				$> E$	/+
$B_{55} \pi C C Z$	$) f i " \$( fi ) Z \$ i \pi Q " \$ 9. D F5$				Z X
$( : i / =$	$G_{55} D / << G L I_{5/12} D V E 6$		I <		/"
$( )$	$B_{Kt} / D B_{Kt} \dots D I X L 9_{M} D : > E F5$		R <		/"
$( : i \dots =$	$G_{KC} D L : E G$		Y / <		/"
$( )$			<<		/"
$C_{i /} : C_{i \dots} =$			U : Y/E =		







This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.