LAMINA S.I.

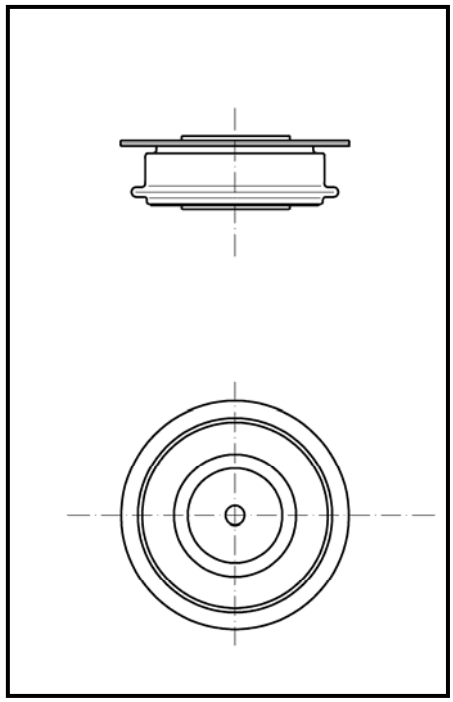
D63-600
Diode

KKD63600, February 2003 version

Diode type D63 are of modern design with pressure contacts, high alumina ceramic insulator and cold-welding encapsulation. Designed for use in power rectifying circuits and equipment under normal operating conditions.

KEY PARAMETERS

U_{RRM}	up to	1200 V
$I_{F(AV)}$		600 A
I_{FSM}		6400 A



Outline type code: JEDEC DO-200AA
See Package Details for further information

FEATURES

- all diffused design
- high current capabilities
- high surge current capabilities
- high rated voltages
- low thermal impedance
- tested according to IEC standards
- compact size and small weight

APPLICATION

- High Voltage Power Supplies
- Motor Control
- Battery Chargers
- Free Wheeling Diode
- Resistance Welding

Designed for use in high power industrial and commercial electronic circuits and equipment where high currents are encoutered and high reliability is essential. Low forward voltages let minimize energy loss.

ORDERING INFORMATION

When ordering please refer to device code builder presented below.
Please use the complete part number when ordering, quote or in any future correspondence relating to your order.

D63-600-□□

voltage class (hundreds of volts)

LAMINA *Semiconductors International Ltd.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7570745
Fax.: +48-22-7572734
e-mail: office@laminasi.com.pl
www.laminasi.com.pl

D63-600
Diode

LAMINA S.I.

KKD63600, February 2003 version

ELECTRICAL PARAMETERS

Voltage ratings

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
04	400	500	50
06	600	700	
08	800	900	
10	1000	1100	
12	1200	1300	

Electrical properties

Parameter		Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A		600
	T_c	°C		95
RMS forward current	$I_{F(RMS)}$	A		940
Surge current	I_{FSM}	A	$T_j=T_j max$, $U_R=0,8U_{RRM}$, $t_p=10ms$	6400
I^2t – value	I^2t	kA^2s		204
Forward voltage drop max.	U_{FM}	V	$T_j=25°C$, $I_{FM}=800A$	1,20
Treshold voltage	$U_{F(T0)}$	V		0,68
Slope resistance	r_F	mΩ		0,57
Reverse recovery charge	Q_r	µC	$T_j=25°C$, $I_{FM}=800A$, $di_R/dt=25A/µs$	1500

Termal properties

Parameter		Unit	Test conditions	Value
Thermal resistance, junction to case	R_{thJC}	°C/W	two sided, DC	0,095
Thermal resistance, case to heatsink	R_{thCS}	°C/W	two sided	0,02
Operating junction temperature	$T_{jmin}...T_{jmax}$	°C		-40...+190
Storage temperature	T_{stg}	°C		-40...+190

LAMINA *Semiconductors International Ltd.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7570745
Fax.: +48-22-7572734
e-mail: office@laminasi.com.pl
www.laminasi.com.pl

D63-600
Diode

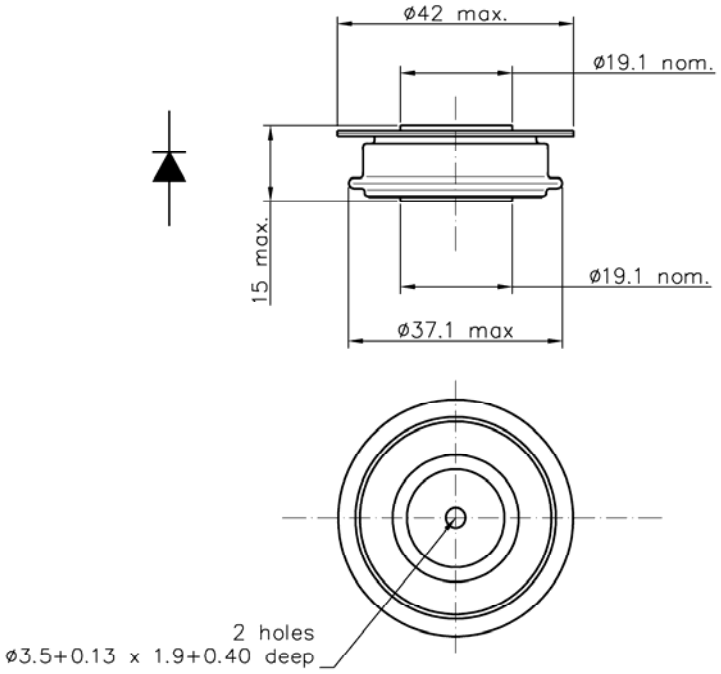
LAMINA S.I.

KKD63600, February 2003 version

Mechanical properties

Parameter		Unit	Value
Clamping force	F_M	kN	4,5 … 6,5
Weight	m	g	60

Package details



Clamping force: 4,5 – 6,5 kN

Nominal weight: 60 g

For further package information, please contact Sales & Marketing Department.
All dimensions in mm, unless stated otherwise.

LAMINA *Semiconductors International Ltd.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7570745
Fax.: +48-22-7572734
e-mail: office@laminasi.com.pl
www.laminasi.com.pl

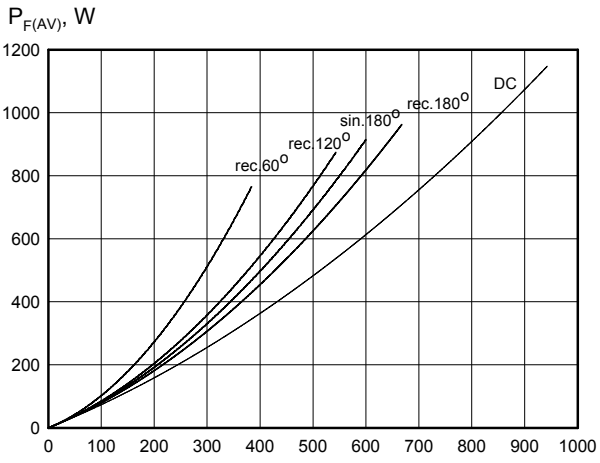
D63-600
Diode

LAMINA S.I.

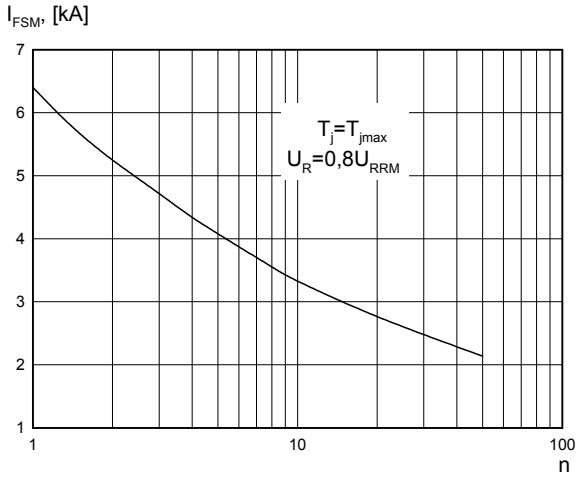
KKD63600, February 2003 version

Do not scale

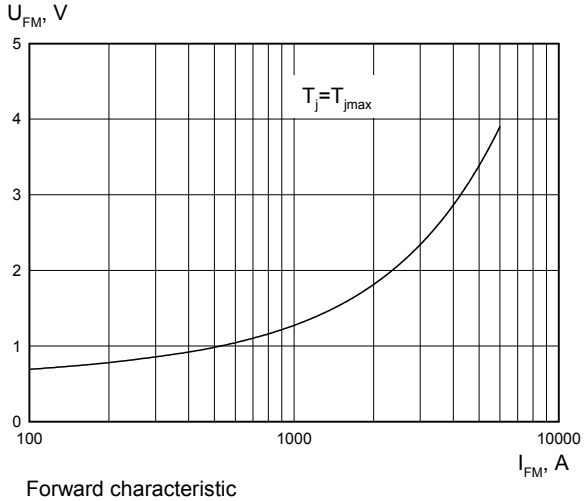
CHARACTERISTICS



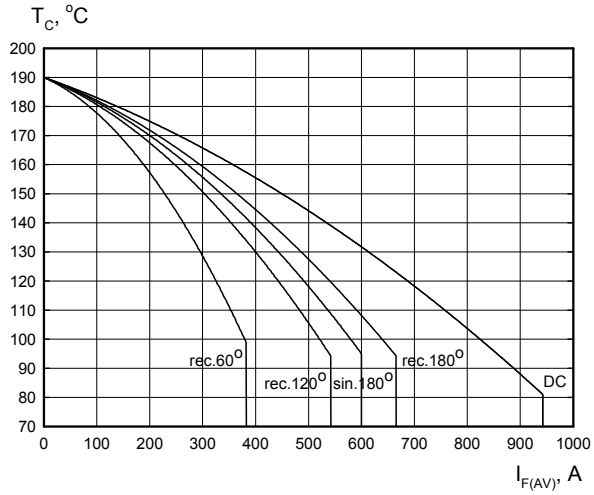
Power loss characteristics



Non-repetitive surge current rating



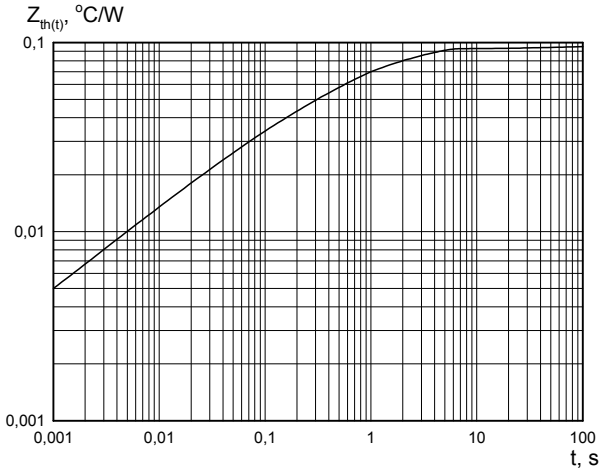
Forward characteristic



Case temperature ratings. Voltage class up to 20 (incl)

LAMINA *Semiconductors International Ltd.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7570745
Fax.: +48-22-7572734
e-mail: office@laminasi.com.pl
www.laminasi.com.pl



Transient thermal impedance

HEATSINKS

LAMINA S.I. has its own proprietary range of extruded aluminium heatsinks designed to optimise the performance of our semiconductors with natural and forced air flow. High efficiency water cooled copper heatsinks are also available.

DEVICE CLAMPS

Disc devices require the correct clamping force to ensure their best operation. LAMINA S.I. offers a wide selection of clamps to suit all of our manufactured devices.

POWER ASSEMBLY CAPABILITY

LAMINA S.I. provides a support for those customers requiring more than a basic semiconductor and offers precisely assembled Power Blocks according to factory or customer standards.

LAMINA *Semiconductors International Ltd.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7570745
Fax.: +48-22-7572734
e-mail: office@laminasi.com.pl
www.laminasi.com.pl